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ABSTRACT

An explanation of the change that has taken place in the aims and purposes of educational policy of industralized societies as the relationship between the education and the occupation systems has changed over the course of the transformation of elite education into a mass phenomenon is the objective of this paper. Analysis and discussion is based on the thesis that in the course of this transformation process social inequality has seen its legitimization challenged and that the demand that "overqualification" be avoided and the qualification processes be geared to the assumed requirements of the occupational system reflects the conscious or unconscious desire to give social inequality once again the legitimization that had been shaken by the expansion of higher education. A summary of the political debate on the expansion of education is followed by an assessment of the way changes in the relationship between the education and the occupation systems are received in the literature. Attention is given to the ideas that expansion leads to overqualification and that it promotes neither equality of opportunity nor any reduction in social inequality. Current developments are then examined as evidence of a fundamental change in the way qualification and status distribution interact. An additional chapter is devoted to an examination of current trends and tendencies in selection processes in education. The final chapter is a discussion of policy proposals that have been developed with the aim of coping with the problems that have arisen under the conditions now governing selection as a result of mass higher education. West German literature on the subject is given particular attention; developments in the U.S. and Japan are discussed; and material on England and a number of other European countries are employed as well. (JT)

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ON THE CHANGING RELATIONSHIPS BETWEEN THE EDUCATIONAL AND OCCUPATIONAL SYSTEMS: CONCEPTIONS AND RECENT TRENDS

Paper presented to the International Labour Office, World Employment Programme

by Ulrich Teichler
in cooperation with
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Contents

		Page
1.	Introduction	1
2.	On shifts in emphasis in academic and political debate	4
3.	Manpower requirements and the expansion of education	11
3.1	The "overqualification" thesis	11
3.2	The expansion of higher education and manpower requirement forecasts	12
3.3	Problems of other approaches for determining qualifications requirements	31
3.4	Some conclusions from the debate on qualifications requirements	54
4.	Educational expansion and status distribution	63
4.1	Equality of opportunity - issues and tendencies	63
4.2	Does the social hierarchy change as a result of educational expansion?	71
4.3	Problems of interpreting developmental trends in connection with educational expansion	79
5.	The relationship between qualification and status distribution	84
5.1	On the growing political explosiveness of status distribution	84
5.2	Historical change in the relationship between qualification and status distribution	91
5.3	Discussion of alternative courses of development and possibilities for adjustment	96
5.4	Some notes of our approach	107
5.5	Problems of the approach and tasks for further research	111
6.	Recent trends and developments in the education system	114
6.1	Objectives of the analysis	114
6.2	Changes in the pattern of selection within education	115
6.3	Problems of university admissions	129
6.4	More recent stratification tendencies in higher education	145
7.	Political consequences	161

1. Introduction

In many of the countries where in the past few years much effort has been made to reform education, reform policies have recently come to be viewed in a pessimistic light, if not as an outright mistake not only by those who had always opposed educational reform, but also by many of its erstwhile advocates.[1]

This change in attitude is only partly due to the economic difficulties that have beset all industrialized countries in one way or the other. Economic difficulties do indeed have an impact to the extent that they put a brake on government expenditures and investment.

In times of over-all economic crisis, with the growth rate possibly severely curtailed, inflation soaring, and unemployment high, such difficulties lead governments to reconsider social priorities and reform programs and to rechannel available resources in order to meet the crisis where it is most severely felt. Although this clearly affects reform-oriented education policy, it does not in our view completely explain the change that has come about in the aims and objectives of education policy as a whole - a shift that predates the current crisis.

In our view, this shift is primarily due to developments that have come about in the relationship between the education and the occupation systems as elite education gives way to mass education. And although qualification problems often dominate discussion about reform-oriented education policy, current debate has been prompted primarily by problems that in our opinion are connected with the status-distributive function of education.

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[1] For the change of emphasis from OECD policy in the early Sixties cf. OECD, Education Committee, Intergovernmental Conference on the Utilization of Highly Qualified Personal-Employment Prospects in the 1970's: Discussion Paper A, Paris: OECD, 1971; and OECD, Policies for Higher Education, Conference on Future Structures of Post-secondary Education, Paris: OECD, 1974.

The fact that - in addition to their qualifying function - education processes play a part in the distribution of social status, is nothing new. However, these two aspects have generally been treated separately in academic studies. In our study we shall attempt to treat them as parts of a single context show how they interact, and in this way explain the change that has taken place in the aims and purposes of education policy as the relationship between the education and the occupation systems has changed over the course of the transformation of elite education into a mass phenomenon.

It is our thesis that in the course of this transformation process social inequality, to the extent that it is based on a hierarchy of qualification destinctions, in particular on distinctions in qualification niveau, has seen its legitimization challenged.[2] The demand - frequently heard in the reform debate - that "overqualification" be avoided and qualification processes be geared to the assumed requirements of the occupation system, reflects in our view the conscious or unconscious desire to give social inequality once again the legitimization that had been shaken by the expansion of higher education.

Our study focusses, to begin with, on the expansion of higher education and the public as well as academic debate on the issue. This expansion lies behind the debate on the "oversupply" of highly qualified personnel and on the supposedly threatening over-qualification, as well as on debate about the distribution of social rewards and status. This expansion in the tertiary

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[2] Publications to date in German: Teichler, Ulrich, "Struktur des Hochschulwesens und 'Bedarf' an sozialer Ungleichheit: Zum Wandel der Beziehungen zwischen Bildungssystem und Beschäftigungssystem", Mitteilungen aus der Arbeitsmarkt- und Berufsforschung, 7 (No. 3, 1974), 197-209; Hartung, Dirk and Reinhard Nuthmann, Status- und Rekrutierungsprobleme als Folgen der Expansion des Bildungssystems, Berlin: Max-Planck-Institut für Bildungsforschung, 1975 (Studien und Berichte, Vol. 32); Teichler, Ulrich, Das Dilemma der modernen Bildungsgesellschaft: Japans Hochschulen unter den Zwängen der Statuszuteilung, Stuttgart: Klett, 1976.

sector should also be borne in mind in evaluating debate on:
- the diminishing attractiveness of education at less than university level;
- the difficulty of defining in positive terms what qualifications such new or traditional education programs should transmit;
- efforts to establish new, hierarchically differentiated education programs both within and alongside existing institutions of higher education.

Our approach is both empirical and theoretical. On the one hand we want to show how the relationship between education and occupation or socio-economic status changes. This involves investigating whether there is a tendency toward "overqualification", whether the influence of education on the distribution of opportunities in society changes, and how the structure and the process of selection change within education itself. On the other hand, we plan to discuss the limitations of a number of theories on the social function of education, and we shall point to certain approaches which might prove to be of heuristic value for the interpretation of current developments in the relationship between the education and the occupation systems as well as for the analysis of political debate and decisions in this area.

We will begin by taking a close look at political debate on the expansion of education. This will be followed by an assessment of the way changes in the relationship between the education and the occupation systems are received in the literature, which conventionally has dealt with qualification and status distribution in education as two different affairs. We shall focus on those assumptions that lie at the heart of political pessimism about educational expansion: on the one hand, that expansion leads to overqualification, and on the other that such expansion promotes neither equality of opportunity nor any reduction in social inequality, i.e. any lessening in the disparaties that exist with regard to real life chances. We shall then go on to explain our interpretation of current

developments as evidence of a fundamental change in the way qualification and status distribution interact. An additional chapter is devoted to an examination of current trends and tendencies in selection in education - changes in selection patterns, new stratification tendencies in the tertiary sector and selection processes. Underlying this chapter is our thesis that the education system retains its importance for the distribution of social opportunities even if the distinctions between one educational niveau and the other are reduced and the pattern of social inequality remains relatively constant. The final chapter is reserved to a discussion of policy proposals that have been developed with the aim of coping with the problems that have arisen under the conditions now governing selection as a result of mass higher education.

The analysis that follows focusses on these developments and concomitant academic and political responses in industrialized societies. West German literature on the subject is given particular attention; developments in the United States and Japan will be discussed, and material on England and a number of other European countries has been employed, as well.

2. On shifts in emphasis in academic and political debate

If one attempts to reconstruct the political climate that especially since 1960 has prompted many an industrialized country to reform its educational system and in particular expand its higher education, it is difficult to isolate one single factor as decisive. Discussion at the time revolved around both the contribution of education to economic growth and equality of opportunity as an objective, yet there is no way of determining for certain which of the two had the stronger impact on developments. Similarly, it is difficult to say exactly which of the arguments that were used to justify a policy of expansion were actually decisive in

affecting political decisions. The difficulty in making a clear evaluation of the relative impact of the various factors is not in this case due to any systematic weakness in the analytic capacity of the social science approach in regard to relating social determinants and political processes adequately. Instead, the policy objective to expand higher education was based initially on a broad consensus - founded on a wide variety of notions about how selection within the education system and the qualification structure should be changed.

The usual argument for change in the qualification structure[3] was generally that it would make possible a closer adjustment to manpower needs. This could mean pinpointing qualification deficits and trying to eliminate them; it could also mean anticipating changes in qualification requirements and adjusting education programs accordingly. However, there was some hope that expansion would create more opportunity to encourage people according to their individual capabilities and would enable a greater number of people to develop a critical approach to the conditions under which they work and live, and thereby take more active part in improving their society.

Realization of equality of opportunity[4] through education was seen as a means first to take the emphasis off those ascriptive traits that continued to figure prominently in the status-assignment process and, second, to counteract the force of class-specific educational aspirations, barriers as well as discrimination. It should be noted: social inequality as such

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[3] For reference to literature on the discussion of the development of qualifications requirements cf. Ahamad, Bashir and Mark Blaug, eds., The Practice of Manpower Forecasting: A Collection of Papers, Amsterdam: Elsevier, 1973; Vaizey, J. E., The Political Economy of Education, London: Duckworth, 1972; and Windham, Douglas M., "The Economics of Higher Education," in P.G. Altbach, ed., Comparative Higher Education Abroad: Bibliography and Analysis, New York: Praeger, 1976, 183-221.

[4] For the discussion on the problems involved in equal opportunity cf. in particular Husén, Torsten, Strategies for Educational Equality, Paris: OECD, 1974 (DAS/EID/74.49), mimeogr. See also below fn. 118.

was not at issue; as this orientation would have it, social status was to be acquired only on the basis of achievement in education and on the job, and only in this way could it be made legitimate. What generally was left out of the discussion was the extent to which social status is established in the process of pre-career selection or over the course of a working life. This, despite the fact that equal opportunity policy rests on the assumption that education is decisive in the distribution of life chances, leaving only very limited possibilities for revision throughout a person's life.

What some expected of such a policy was that social conflict would subside when access to high-status positions is open to all at least as a matter of principle, and when nothing continues to stand in the way of the most ambitious members of all groups and classes in society, and when failure to succeed can no longer be said to be caused by an inequitable social order, but rather solely by personal inability to succeed in competition with others in education and on the job.

Others, convinced that there is a dynamic relationship between aptitude and learning ability, expected that once the social barriers in education fall, disparities in niveau will tend to even out and this in addition to other factors will eventually lead to a more general reduction in social inequality.

Those who advocated a policy of expansion saw it as a means of reconcilling different ideas both about the concrete objectives various educational programs should have as well as about the distribution of social status. For many, this policy even embodied the hope of reconciling the goal of equal opportunity with that of raising the general qualification level. A lessening of inequality in educational opportunities was seen as the key to social equity, a means of insuring that the most gifted members of society have access to the most important positions, and as a vehicle for change in the structure of qualifications, promising social progress and economic growth.

Expansion-oriented education policy has differed in distinctive ways from country to country, depending among other things on the political constellation, traditions in the relation between education and occupation, and the part the state plays in financing higher education. In many societies a concurrence of mainly liberal expectations prevailed for a time, with educational expansion promising economic growth, more equitable rewards on the basis of achievement, a reduction in social inequality, and improvement in the individual's capability to deal rationally with his social responsibilities.

In time, this optimistic view of educational reform gave way to skepticism. There now exists, for example, widespread doubt whether the expansion of higher education (at least at the tempo observable) noticably spurs economic growth, and whether the general raising of the qualification niveau automatically promotes more rational behavior on the individual level. So far as the debate on equal opportunity is concerned, there are growing doubts that equal educational opportunity can be provided for all social classes. In addition, the question is being raised whether equality of educational opportunities - supposing this could be realized to begin with - could ever bring about a corresponding measure of equality in socio-economic status. There is moreover widespread doubt whether educational planning can be oriented toward equality of opportunity and at the same time satisfy the presumed qualification needs of the occupation system.

Political debate on the issue often brings two positions to the fore which do more to add confusion than promote clarity about the relationship between the education and the occupation systems. Those who take the one position cite the "failure" of the expansion policy vis-à-vis objectives which - however much these may have been in the minds of expansion advocates - were not what was decisive in the realization of the reform measures that were actually implemented. Some conservative experts who have successfully fought any whole-

hearted equal opportunity policy, point to those limited improvements in educational opportunity that have come about as a result of the very watered-down reforms they themselves helped produce, and call these "proof" that education does little to improve equality of opportunity. This criticism dovetails with that of certain erstwhile proponants of equal opportunity whose concern has been selection on the sole basis of achievement; their complaint now is that educational reform as it has been implemented has not substantially reduced social inequality. The fact that certain occupational positions are becoming available only to people whose qualifications are higher than what was previously required, is viewed by these critics negatively, as "displacement", whereby they fail to see that this development is only the logical consequence of that "active education policy" which they themselves had once promoted.

Advocates of the second of these two positions maintain after the event, as it were, that the premises of the "active education policy" were wrong because educational expansion failed to produce the desired results. The premise, for example, that the reduction of social discrimination and the realization of equal opportunity in education will create more equality in society as a whole, is held to be wrong since the structure of social inequality - measured against the disparities in the social rewards and life chances that are coupled to specific occupational positions - has not altered in any significant way, despite the fact that there has been a reduction in differences due to length of study. What is consciously or unconsciously overlooked in all this is the fact that because there does exist an interrelationship between education and society, any lessening of discrimination and realization of equal opportunity do indeed have an equalizing impact on society as a whole. Yet at the first signs of such a tendency, a political reaction tends to set in with the purpose of nipping such developments in the bud.

It is our thesis that all these critics either fail to register the change that has been taking place in the relationship between the education system and the occupation system - or for political reasons they give a distorted interpretation. Yet wherever such reforms have been implimented, there can be seen a great readiness to learn, and easier access to higher education has led to a considerably increased enrolment in all countries. This in turn produces a discrepancy between the education system's qualification output and the prevailing hierarchically differentiated qualification requirements of the occupation system, with the result that a contradiction has tended to develop between the existing structure of unequal social rewards and life chances on the one hand and the aspirations which expansion policies have fostered on the other.

This has produced a number of problems: 1) So far as the substantive relationship between education and occupation is concerned, it is necessary to determine whether the division of labor in society, the differentiated job structure and the occupational role structure change or can be made to change in such a way that all college and university graduates can be usefully employed. In as much as on the basis of what we presently know it is uncertain whether what is being producted is actually useful, it become increasingly important to determine whether employers and university graduates alike are becoming accustomed to a state of affairs in which although the employee's qualifications may exceed the primary requirements of his occupational role, he is able to do a better job altogether. This can mean that he is better equipped to handle unusual, unexpected or new jobs, is more capable of being creative and innovative in the work assigned to him, and more competent in his activities and obligations off the job. This leads to a further question: to what extent is alleged "overqualification" - measured against relatively narrow and static role requirements - not only tolerable but also perhaps socially and economically reasonable, desirable and - in view of social change - even necessary.

2) In regard to the relationship that existed prior to expansion between educational degrees and level on the one hand and the assignment of occupation positions, possibilities for individual initiative and social status on the other hand, it is necessary now, in the course of expansion, to determine whether the existing ties are being preserved, loosened, or replaced by new forms of interrelationship between the education process, employment and status assignment.

Friction can be expected as a result of the following circumstances. As educational opportunities become more equal and educational disparities level off, the previously existing relationship between education and occupation/status is challenged by the fact that more and more graduates possess the criteria which govern access to higher occupational and status positions. An increase in the number of these positions could have the effect of leaving the challenged relationship between education and occupation/status unchanged, but would have equalizing consequences with regard to social structure and its differentiation. The whole problem is further illustrated by the demand recently made in political circles that graduates should cease thinking they are "entitled" to a particular position, action radius as well as status commensurate with their school and type of degree. This makes it clear that there are forces in society that are bent on maintaining social inequality in the face of educational expansion.

This nexus of problems reveals how closely the qualification and status distribution processes are interrelated. Yet throughout the debate on the pros and cons of educational expansion, qualification and status distribution have generally been treated as separate and distinct concerns. Only seldom is their interrelationship evident in such debate, as it has been in discussion about whether expansion is an appropriate means for creating more social equality if this makes higher education questionable in terms of its economic value to society. Or in debate on whether access to higher education

can remain open if at the same time these educational attainments are prevented from justifying expectations and claims for a specific occupational action radius, higher position and higher status.

There may well be political reasons for the tendency, in political debate on education, to separate qualification and status distribution, for the demand that a brake be put on educational expansion is more readily rationalized in terms of manpower problems than by any appeal to preserve existing social inequality. As we shall see, the same tendency to separate qualification from status distribution can also be observed in academic circles.

In the following pages we shall look more closely at the academic discussion on qualification and status distribution in order to determine to what extent it serves to explain the difficulties of correlating the education system and the occupation system that have come about as a result of expansion.

3. Manpower requirements and the expansion of education

3.1 The "overqualification" thesis

One often hears it said that the rapid expansion of higher education in the Sixties produced an oversupply of highly qualified personnel with the result that many graduates were overqualified for the jobs which - often after a laborious search - finally they found. Although such a statement can be easily confirmed by everyday experience and observation, there is nonetheless a danger here of generalizing too quickly from the difficulties particular groups have experienced. So it is that the example of graduates working as taxi drivers, service station attendants or ticket clerks is brought forward in order to underline the evidence of overqualification, whereby the fact is neglected that the economic situation and,

in particular, the labor market situation has consequences for all employed persons. The use of such example reveals, however, how difficult it is to prove "overqualification" as a general tendency; extreme examples are often cited in order to avoid a differentiated explanation.

At the heart of manpower requirement forecasts is the question whether there exists a general tendency toward "overqualification" or whether other discrepancies have developed between the qualification requirements of the occupation system and the output of the education system. Such forecasts are given particular weight in those countries where university capacity is largely set by planning decisions. In discussing such forecasts we shall give the political context detailed treatment since it is vital to the way forecasts are developed and the results are analyzed. There are in addition a number of other approaches which have produced important findings for the discussion of qualification discrepancies; these we shall discuss only in as much as they have a bearing on our central theme.

3.2 The expansion of higher education and manpower requirement forecasts

The debate on manpower requirement forecasts can serve perhaps better than any other issue to show what is meant by the argument that there had existed a satisfactory relationship between education and occupation before higher education ever began to expand and mass higher education had begun to produce widespread "overqualification". In order to demonstrate what difficulties such prognoses entail, we have chosen as example West Germany since manpower requirement forecasts are commonplace there and have figured prominently political reac-

tion to educational expansion in that country.[5]

There is currently renewed interest in manpower requirement forecasts in West Germany as a result of the controversy that has broken out over the issue of planning in higher education in relation to manpower needs. The constitutional guarantee that all citizens have "freedom of choice in occupation, workplace and educational institution" was interpreted in the Sixties to mean that every eligible citizen had the right to study the subject of his choice at the institution of his choice. When the government, which finances the universities, refused to expand capacity in all departments to meet individual demand, the issue was brought before the Federal Constitutional Court which in 1972 laid down the conditions under which admissions restrictions can be considered consonant with the constitution. These conditions are that university expansion must be primarily oriented toward popular demand while making allowance for market requirements, as far as they can be determined; existing university capacity must be exploited to the full; and applications must be weighed according to uniform criteria. Since the high court placed indiviudal wishes before the putative requirements of society, it is generally assumed that the only justification for capacity restrictions is evidence of a clear-cut societal need.[6] Such

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[5] For the debate on requirements in West Germany cf. the collections edited by Lohmar, Ulrich and Gerhard E. Ortner, Die deutsche Hochschule zwischen Numerus clausus and Akademikerarbeitslosigkeit: Der doppelte Flaschenhals, Hannover: Schroedel, 1975; and Arbeitsgruppen des Instituts für Arbeitsmarkt- und Berufsforschung and Max-Planck-Institut für Bildungsforschung, eds., Bedarfsprognostische Forschung in der Diskussion, Frankfurt a. M.: Aspekte, 1976.

[6] On university admissions in West Germany cf. Asche, Holger, Jürgen Lüthje, and Erich Schott, Der Numerus clausus oder Wer darf studieren? Reinbek bei Hamburg: Rowohlt, 1973; Bahro, Horst, Willi Becker, and Josef Hitpass, Abschied vom Abitur?: Hochschulzugang zwischen Numerus clausus und Massenbildung, Zürich: Interfrom, 1974; "Hochschulzugang", Studentische Politik, 8 (Nos. 6/7, 1975); Friedrich, Leo and Karl Köhler, eds., Zeugnisnoten und Numerus clausus, Kronberg, Ts.: Scriptor, 1975; Flitner, Andreas, ed., Der Numerus clausus und seine Folgen: Auswirkungen auf die Schule, die Schüler, die Bildungspolitik - Analysen und Gegenvorschläge, Stuttgart: Klett, 1976.

an exigency might be, for example, that additional expenditures for higher education would cause other critical social services to be neglected, or it might be that a given supply of college graduates would cause intolerable friction on the labor market. In order to determine the actual situation and establish the need for university graduates, the government commissioned an unprecedented number of forecasts in 1974 and 1975.[7]

With each new prognosis - individual findings of which are either incompatible or subject to a wide range of interpretation - it becomes increasingly clear that manpower requirements, by the very fact that it is impossible to establish a clear and unambiguous picture, lend themselves to political exploitation as justification for decisionistic planning of higher education.[8]

It was in the early Sixties that the first - at that time still rather global - manpower requirement estimates utilizing international comparison, trend extrapolation and plausibili-

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[7] Cf. the studies by McKinsey & Company, Hochschulabsolventen im Beruf: Ausbildungsbedarf für Mediziner bis zum Jahr 2000, Bonn: Bundesminister für Bildung und Wissenschaft, 1974; Battelle-Institut, Hochschulabsolventen im Beruf: Bedarf und Angebot an Ingenieuren und Naturwissenschaftlern in der Bundesrepublik Deutschland bis 1990, Bonn: Bundesministerium für Bildung und Wissenschaft, 1975. See also Hegelheimer, Armin and Gernot Weisshuhn, Ausbildungsqualifikation und Arbeitsmarkt: Vorausschau auf das langfristige Arbeitskräfte- und Bildungspotential in West-Berlin, Berlin: Deutsches Institut für Wirtschaftsforschung, 1973, mimeogr.

[8] Cf. for example the argument expressed by Böning, Eberhard, "Zur Wechselbeziehung von Ausbildungssystem und Beschäftigungssystem," Deutsche Universitätszeitung, (No. 24, 1974), 1026-1029, as well as Wissenschaftsrat, Empfehlungen zu Umfang und Struktur des Tertiären Bereichs, 4. Entwurf, Köln: Wissenschaftsrat, 1976, mimeogr.; and Bundesminister für Bildung und Wissenschaft, Hochschulrahmengesetz, Bonn: Bundesminister für Bildung und Wissenschaft, 1976.

ty inference were made and published in West Germany.[9] They contributed to the spread of the belief that it would be necessary to expand college-preparatory and higher education to a considerable degree in the long run if the country's economy was to remain internationally competitive. Between 1967 and 1971, however, there came a series of prognoses based on the methodologically more stringent Manpower Requirements Approach[10] which created the impression that the number of graduates as a whole was tending to expand faster than the number of jobs forecasted for highly qualified personnel.

Studies such as these, which had been carried out for some time in a number of other countries and were by this time quite prevalent[11], undoubtedly contributed to creating a

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[9] Cf. the general assumptions in Edding, Friedrich, Ökonomie des Bildungswesens: Lehren und Lernen als Haushalt und als Investition, Freiburg i.Br.: Rombach, 1963, and Picht, Georg, Die deutsche Bildungskatastrophe, Olten: Walter, 1964. Cf. also Alex, Laszlo, "Absolventenangebot und berufliche Flexibilität," in Ulrich Lohmar and Gerhard E. Ortner, eds., Die deutsche Hochschule zwischen Numerus clausus und Akademikerarbeitslosigkeit: Der doppelte Flaschenhals, Hannover: Schroedel, 1975, 92-105, for the historical development of the manpower requirements prognoses.

[10] Riese, Hajo, Die Entwicklung des Bedarfs an Hochschulabsolventen in der Bundesrepublik Deutschland, Wiesbaden: Steiner, 1967; Krafft, A., H. Sanders, and P. R. Straumann, Hochqualifizierte Arbeitskräfte in der Bundesrepublik Deutschland bis 1980: Sozioökonomische Analyse und Prognose, Bonn: Der Bundesminister für Bildung und Wissenschaft, 1975 (Schriftenreihe Hochschule, vol. 6); Alex, Laszlo et al. Angebot und Bedarf an hochqualifizierten Arbeitskräften in der Bundesrepublik Deutschland bis 1980, München: Gersbach, 1972; cf. also Widmaier, Hans Peter, et al., Bildung und Wirtschaftswachstum: Eine Modellstudie zur Bildungsplanung, Villingen: Neckar-Verlag, 1966.

[11] Cf. bibliographical notes in Ahamad and Blaug, op. cit.; Boberg, Gisela and Kirsten Ebeling, Bibliographie Akademikerbedarf, Hannover: Hochschul-Informations-System, 1972 (HIS-Brief, No. 26); cf. in addition OECD, Employment Forecasting, Paris: OECD, 1963; OECD, Long-range Policy Planning in Education, Paris: OECD, 1973; OECD, Directorate for Scienctific Affairs, Some Problems of the Development of Higher Education in Europe, Paris: OECD, 1969.

greater sense of awareness in expert circles for problems connected with the relationship of education to the market and employment, yet they were soon all but forgotten in the policy discussion. Part of the responsibility for this development must be laid at the door of the theoretical and methodological criticism of the manpower requirement approach that was then being voiced in the field[12]; another factor was the rejection, by education planners and politicians alike, of the notion that education planning had to be oriented toward expected manpower requirements and nothing else. Such criticism was welcome at a time of great readiness for social and educational reform.

Two approaches, neither of which had developed its own reliable means of predicting future changes in occupational structure or the corresponding manpower requirements, have been particularly instrumental in showing that the notion of "requirement" usually used in prognoses on the requirement for highly qualified manpower may well be, in itself, a restrictive concept.

One such strategically valuable study, published in 1970, dealt empirically with the employment of graduates in political science[13] and pointed to the fact that there may

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12 Hartung, Dirk, Reinhard Nuthmann, and Wolfgang Dietrich Winterhager, Politologen im Beruf: Zur Aufnahme und Durchsetzung neuer Qualifikationen im Beschäftigungssystem, Stuttgart: Klett, 1970; Armbruster, Wolfgang, Arbeitskräftebedarfsprognosen als Grundlage der Bildungsplanung: Eine kritische Analyse, Berlin: Max-Planck-Institut für Bildungsforschung, 1971 (Studien und Bereichte, Vol. 23); Lutz, Burkart and Inge Krings, Überlegungen zur sozioökonomischen Rolle akademischer Qualifikation, Hannover: Hochschul-Informations-System, 1971 (HIS-Brief, No. 18).

13 Hartung, Nuthmann and Winterhager, op cit. On the significance of this study cf. Riese, Hajo, "Bildungsexpansion und Hochschulstruktur," in Ulrich Lohmar and Gerhard E. Ortner, eds.,op. cit., 284-305, esp. 289 ff; International Labour Office, Some Growing Employment Problems in Europe: Manpower Aspects of Recent Economic Developments in Europe, Geneva: International Labour Office, 1973.

exist an unanticipated requirement. Since political science was at that time a relatively new field of study at German universities, notions about the professional application of this type of training, job possibilities and manpower requirements could not be developed in the conventional way, on the basis of manpower requirement forecasts. The study showed that qualification requirements grew in part out of the supply of graduates - that their qualifications modified occupational roles, opened up new tasks, or created awareness of previously neglected needs. That such requirements existed did not become apparent until after some time had passed and a certain amount of experience had been gained with the employment of political science graduates. On top of everything else, the difficulty of ascertaining the need for this type of education is aggravated by the fact that qualification expectations and ideas about what work is appropriate are particularly vague in a field which has yet to become an established profession.

This study also drew attention to the way qualifications promoted by university training relate to those social skills which are not primarily implanted by the university but which to a large extent shape a person's ability to master a job, and play an important role in selection processes in the labor market.

As a result of these considerations, the authors of the study proposed countering the manpower approach with a new research strategy, which they call the "absorption approach". Its focus is on the question: under what conditions can the occupation system absorb growing numbers of graduates, and how would this effect recruitment, occupational structure, the development of occupational roles, etc.
The intention of this study was not to explain in detail

the occupation system's capacity to absorb manpower[14]; its real service lies in demonstrating in one critical instance that the traditional notion of "demand" is too narrow a concept, that supply-induced effects need to be taken into consideration, and that those who work with requirement forecasts have only a very vague idea of what they mean by "qualification". This indicates that there is a wider field for education policy than the manpower requirement approach would lead one to assume.[15]

There are a number of additional studies on the relationship between higher education and employment in other industrial countries that have similar strategic value to research.[16]

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[14] In asserting that studies of marginal occupational groups do not lend themselves to an evaluation of the occupation system's ability to absorb qualifications, Asendorf-Krings, Inge, et al., Zur Bestimmung von Qualifikation und Qualifizierungsprozessen: Das Problem des Verhältnisses von Bildung und Produktion, München: Sonderforschungsbereich 101 der Universität München, 1974, esp. p. 6, miss the strategic point of the study altogether.

[15] Cf. Riese, Hajo, "Bildungsexpansion und Hochschulstruktur," op. cit., and the requirements study conducted by Heindlmeyer, Peter, et al., Berufsausbildung und Hochschulbereich: Eine quantitative Analyse für die BRD, Pullach b. München: Verlag Dokumentation, 1973.

[16] Tessaring, Manfred and Heinz Werner, Beschäftigungsprobleme von Hochschulabsolventen im internationalen Vergleich, Göttingen: Schwartz, 1976 (Schriften der Kommission für wirtschaftlichen und sozialen Wandel, Vol. 53); Teichler, Ulrich and Teichler-Urata, Yoko, Der Arbeitsmarkt für Akademiker in Japan, Göttingen: Schwartz, 1975 (Schriften der Kommission für wirtschaftlichen und sozialen Wandel, Vol. 51).

International comparison gives rise to the following questions: if it is the case that in some countries where the level of industrial development is roughly equal to that of West Germany the occupation system is able to provide gainful employment for a greater number of highly qualified people, then would it not be possible to develop broader, alternative notions of what "demand" constitutes as a means of determining what additional use could be made of highly qualified manpower, which would favor the expansion of higher education and make the elimination of restrictions on study opportunities seem a sensible idea.

So it is that there have recently appeared a number of studies in West Germany on the relationship between higher education and career in countries where education has expanded to a greater extent than it has there, with a view to possible consequences for education policy in that country. In the following pages, we shall examine some of their more important conclusions along with other data that show the importance of developments in the more expanded systems for the discussion in countries with relatively lower quotas of students or where there is strong political opposition to opening higher education to larger sections of the population.

1. In a number of countries the proportion of university graduates in the employed population as a whole is considerably higher than in West Germany. In the year 1970, it was 12.5% in the United States, ca. 6% in Canada, Japan and Sweden, but only 3.8% in West Germany.[17] In countries

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[17] Cf. Tessaring, Manfred, "Bildungsexpansion und Arbeitsmarkt für hochqualifizierte Arbeitskräfte im internationalen Vergleich," Deutsche Universitätszeitung (No. 11, 1975), 434-437, esp. p. 435.

with a relatively high percentage, it is estimated that the graduate quota will continue to increase at a rapid rate: in the United States this figure is expected to increase to 16.4% by 1980, and to 21.7% by 1990.[18] At the beginning of the current decade it was estimated in Japan that the proportion of a given cohort newly enrolled at institutions of higher education - 24% in 1970 - would jump to 47% by 1980[19], whereby the proportion of college graduates among those entering the labor force was expected to increase over the same period from 20% to 31%.[20]

2. The rate of unemployment is as a rule lower among college graduates than it is among the labor force as a whole. A study of figures from thirteen industrialized countries[21] has shown that only in Italy[22] was the unemployment rate higher among college graduates. Four of the countries studied showed an unemployment rate for graduates of less than half the figure noted for the employed population as a whole: England (1.0% vs. 3.3% in 1971), United States (2.1% vs. 5.2% in 1973), West Germany (.7% vs. 2.1% in 1974) and Austria (.1% vs..9% in 1974). Although some countries have registered an increase in unemployment among the newly

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18 Johnston, Denis F. Education of Workers: Projections to 1990, Washington, D.C.: U.S. Department of Labor, Bureau of Labor Statistics, 1974 (Special Labor Force Report, No. 160).

19 Ministry of Education, Japan, Basic Guidelines for the Reform of Education, Tokyo: Ministry of Education, 1972, 58 f and 70. In the meantime the prognosis has changed, with a lower rate of growth in student numbers expected; cf. "University Education in Trouble," Japan Quarterly, 22 (No. 3, 1975), 190-193, esp. p. 191.

20 Rodosho Shokugyoantekeikyoku, Koyo no genjo to mitoshi, Tokyo: Rodosho, 1972.

21 Werner, Heinz, "Arbeitslose Akademiker: Wenn alle stempeln gehen ... zahlt sich ein akademisches Studium aus," Analysen, 5 (No. 2, 1975), 28-30, esp. p. 29.

22 On the particular situation in Italy cf. International Labour Office, Some Growing Employment Problems in Europe, op. cit.

graduated during periods of economic crisis or particularly rapid expansion in higher education, there is no evidence that over the course of expansion persons holding college degrees are any more prone to unemployment than employees with a different type of training. Furthermore, college graduates suffer a relatively lower rate of unemployment than average during the period between graduation and employment, which indicates that their generally lower rate is not due alone to the greater job security in public service, where college graduates are overproportionally represented.

3. Even in countries where the overall proportion of college graduates is high, the college graduate can as a rule count on obtaining a better job than secondary school graduates do.[23] In a number of countries, the university graduate's advantage in terms of income appears to be diminishing.[24] In Japan, for example, starting salaries in business and industry were 61% higher in 1955 for male university graduates than for male upper secondary school graduates; by 1971 this advantage had dwindled to 28%.[25] In the United States, male university graduates earned 50% more than high school graduates in 1969; by 1973 the difference was 'only' 41%.[26] However, these discrepancies remain too large to allow one to speak of any levelling in the field of incomes, let alone of proof that there exists an "academic proletariat".

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[23] Cf. Tessaring and Werner, op. cit.

[24] See, for example, the findings of the various surveys carried out among West German engineers, especially that by Oppelt, Claus, Ingenieure im Beruf: Eine empirische Analyse zertifikatsspezifischer Unterschiede im beruflichen Einsatz technischer Arbeitskräfte, Berlin: Max-Planck-Institut für Bildungsforschung 1976 (Studien und Berichte, Vol. 37).

[25] Monbusho, Kongo ni okeru gakko-kyoiku no sogotekina kajuku seibi no tame no kihonteki shisaku ni tsuite: Chuo kyoiku shingikai toshin, Tokyo: Monbusho, 1971, 340; Rodosho, Rodo keizai no bunseki: Showa 50 nen, Tokyo: Rodosho, 1975, esp. p. 265. Cf. also Teichler and Teichler-Urata, op. cit., pp. 75-92.

[26] Freeman, Richard B., "Overinvestment in College Training?," Journal of Human Resources, 10 (No. 3, 1975), 287-311, esp. p. 296.

4. The proportion of college graduates employed in business and industry shows considerable fluctuation from country to country even when the nations compared have roughly equal percentages of university graduates in the population as a whole. In England, for example, about half the university graduates go into business and industry[27], in West Germany[28] and France[29] only about a fourth. In countries which have a particularly high overall rate of university graduates, to be sure, a very high proportion of these generally goes into business and industry.[30]

5. Expansion of higher education is quite clearly accompanied by changes in the ideas employers have about qualifications requirements[31] as well as in the notions college graduates

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27 Greenaway, Harriet, "The Impact of Educational Policies," in H. Greenaway and G. Williams, eds., Patterns of Change in Graduate Employment, London: Society for Research into Higher Education, 1973, 1-23, esp. pp. 12/13.

28 Institut für Arbeitsmarkt- und Berufsforschung der Bundesanstalt für Arbeit, Hochschulbildung und Arbeitsmarkt: Ausbildung und Beschäftigung hochqualifizierter Arbeitskräfte, Nürnberg: Bundesanstalt für Arbeit, 1975 (Quintessenzen aus der Arbeitsmarkt- und Berufsforschung, No. 3), esp. pp. 26 ff.

29 Tessaring and Werner, op. cit.

30 Cf. McEaddy, Beverly J., Educational Attainment of Workers, March 1974, Washington, D.C.: Department of Labor, Bureau of Labor Statistics, 1974; Teichler and Teichler-Urata, op. cit.; on the occupational structure of university graduates cf. OECD, Statistics of the Occupational and Educational Structure of the Labour Force in 53 Countries, Paris: OECD, 1969; Ushiogi, Morikazu, "A Comparative Study of the Occupational Structure of University Graduates," Developing Economics (Tokyo), 9 (No. 3, 1971), 350-368.

31 Cf. the analysis of manpower policies in Japan in Teichler and Teichler-Urata, op. cit.

have about what constitutes satisfactory employment.[32] Thus, in some countries people are becoming accustomed to the idea that a large proportion of office and sales workers are university graduates. In West Germany the proportion of such workers who have university degress was only 1.3% in 1970[33], and in the United States 9.2% in 1974[34], and in Japan 9.8% in 1970.[35] Although changing ideas about manpower requirements do not preclude discrepancies from developing now and again between career hopes and job openings, this does not seem to be preventing a long-term, fundamental change of opinion about what should constitute appropriate work for a college graduate.

6. A recent comparative study of the employment situation of college graduates in a number of industrial countries has provoked the conclusion that "most of the countries which have had long 'prognosis-experience' - such as Japan, the United States and Sweden - are becoming more and more inclined to refrain from making the kind of rigid supply-and-demand prognoses that have (once again) become common practice in West Germany".[36] It should be added that these

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32 This conclusion is supported by personal impressions of what students wish to study and become. Few empirical studies have been conducted among employed college graduates - Tessaring and Werner, op. cit., refer to the available data - and they are of little use in our present context.

33 Cf. Parmentier, Klaus and Manfred Tessaring, "Bildungswesen und Arbeitsmarkt für Hochqualifizierte: Eine Übersicht," in Arbeitsgruppen des Instituts für Arbeitsmarkt- und Berufsforschung and Max-Planck-Instituts für Bildungsforschung, eds., Bedarfsprognostische Forschung in der Diskussion, op. cit.

34 McEaddy, op. cit., p. A-17.

35 On the basis of census reports; cf. Teichler and Teichler-Urata, op. cit., p. 155.

36 Tessaring, op. cit., p. 436.

are precisely the countries which have a higher proportion of university graduates than does West-Germany. Two examples:

- In the United States, over 12% of the labor force had attended college for four years in 1970; the Department of Labor has estimated that between 1972 and 1985 23.7% of the jobs available will be earmarked for university graduates, and that this will guarantee jobs for 95% of all graduates; so far as the remaining 5% is concerned, it is assumed that these persons will not suffer any notable unemployment, and instead will take over jobs which had hitherto been held by persons with less education. In analyzing the projected increasing number of job openings, this prognosis dispenses with drawing any systematic distinction between allegedly genuine qualifications requirements and upgrading tendencies.[37]

- In 1959, when in Japan the proportion of degree-holders was 5.5% of the labor force as a whole[38], the estimated requirement was for 9% by 1970; when in 1970 a full 10.6% of all first-time job-holders held university and other college degrees, the government decided to gear its education and employment planning fully to individual demand for college education.[39]

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[37] U.S. Department of Labor, Bureau of Labor Statistics, Occupational Manpower and Training Needs, Revised 1974, Washington, D.C.: U.S. Government Printing Office, 1974 (Bulletin No. 1834); cf. also Rosenthal, Neal H., "Projected Changes in Occupations," in The U.S. Economy in 1985: A Summary of BLS Projections, Washington, D.C.: U.S. Department of Labor, Bureau of Labor Statistics, 1974, 18-25.

[38] Ministry of Education, Japan, Demand and Supply for Graduates from Secondary Schools and Universities, Japan, Tokyo: Ministry of Education, 1961, p. 12.

[39] Cf. Teichler and Teichler-Urata, op. cit., pp. 19-21, 127-129 and 151-155.

For countries like West Germany where the development toward "mass higher education" has not yet reached this point, the analysis of the situation in countries with higher rates of university graduates allows one to draw at least two important conclusions. Countries on the same level of technological and economic development as West Germany can, in principle, accomodate a very much higher number of college graduates than advocates of admissions restrictions in that country consider sensible and feasible. Predictions that an "academic proletariat" is developing seem inappropriate in the light of available data: it is not to be expected that career advantages in terms of income and position will dry out, or that there will be a high rate of unemployment among college graduates. On the other hand - as we shall show - this is no pressing reason to conclude, as some experts persist in doing, that "educational expansion has been necessary in order to overcome the lack of highly qualified manpower".[40]

Of course, there are limitations set on the explanatory value of international comparison by the fact that the factors involved in access to higher education - among them, social structure, patterns of the division of labor, course content, length of study - are not necessarily "transferable". However, West German opponents of further expansion of higher education often exaggerate the limits of "transferability", drawing attention to isolated and apparently absurd examples.[41]

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[40] Tessaring, op. cit., p. 437.

[41] Cf. Linke, Hermann and Norbert Weigang, "Bildungsexpansion und Arbeitsmarkt für hochqualifizierte Arbeitskräfte: Ideologie und Realität," Deutsche Universitätszeitung, (No. 14, 1975), 551-552; Bahro, Becker and Hitpass, op. cit., p. 31.

Systematic criticism of manpower prognoses, evidence that the occupation system is relatively well able to absorb growing numbers of university graduates, and the example of developments in other countries have undoubtedly had an influence on public debate on the future of education in West Germany. Many scholars are no longer willing to take part in drawing up prognoses on the need for university graduates on the basis of the manpower requirement approach.[42] The validity of rigid prognoses has been further challenged by studies on substitution[43], i.e. the possibility of employing graduates in different subjects in the same type of job; when, for example, a secondary analysis of manpower requirements forecasts comes to the conclusion on the basis of certain assumptions about substitution possibilities that the maximal requirement for law graduates is 3.7 times higher than the minimal requirement[44], this shows impressively how inadequate some prognoses are so far as their value for planning is concerned.[45]

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[42] On criticism from this quarter cf. Arbeitsgruppen des Instituts für Arbeitsmarkt- und Berufsforschung and Max-Planck-Institut für Bildungsforschung, op. cit.

[43] Cf. Mertens, Dieter, "Der unscharfe Arbeitsmarkt: Eine Zwischenbilanz der Flexibilitätsforschung," Mitteilungen aus der Arbeitsmarkt- und Berufsforschung, 6 (No. 3, 1973), 314-325.

[44] Kaiser, Manfred, "Zur Flexibilität von Hochschulausbildungen: Ein Überblick über den Stand der empirischen Substitutionsforschung," Mitteilungen aus der Arbeitsmarkt- und Berufsforschung, 8 (No. 3, 1975), 203-221, esp. pp. 216/217. On the methodological approach cf. Kaiser, Manfred, "'Korridorisierung' berufsstruktureller Projektionen unter besonderer Beachtung des Flexibilitätsaspektes," in Arbeitsgruppen des Instituts für Arbeitsmarkt- und Berufsforschung und Max-Planck-Institut für Bildungsforschung, op. cit.

[45] This sort of substitution research becomes problematical, however, when it claims to be able to provide better prognoses; for criticism of this claim see Matthias, Peter, "Möglichkeiten und Grenzen der Verbesserung der analytischen Grundlagen von Arbeitskräftebedarfsprognosen: Die Einbeziehung von Substitution und Flexibilität," in Arbeitsgruppen des Instituts für Arbeitsmarkt- und Berufsforschung and Max-Planck-Institut für Bildungsforschung, op. cit.

In addition, the allegation that too far-reaching expansion of higher education will produce an "academic proletariat" is being heard less and less. The more frequent contention is that what is going on in the labor market is a process of "displacement", whereby persons with more and possibly better education are taking over positions that had previously been held by persons with less education.[46] Leaving aside for a moment the fact that such a process of vertical substitution is one of the declared objectives of any educational reform, the criticism in effect turns the argument on its head: whereas before, criticism was focussed on the fact that life chances were not distributed on the basis of education alone, now question is raised about using education as a standard for status distribution altogether. Criticism of the restrictive approach to manpower requirements has not, however, been able to prevent the fear of a "glut" of college graduates (or at least contention that one exists) from becoming a potent political argument. This criticism has been fed by three problems which have figured in other societies, as well, though perhaps at other stages of expansion or under different historical circumstances:

- Major changes in the way graduates' occupational roles are defined cannot be expected until after the rate of student enrolment has remained high for a number of years[47]; for, as we have seen, there has been a sharp increase in the number of teaching positions at both secondary and university levels, and in other occupational areas it appears that a limited increase in the quota of college graduates does not initially produce any qualitative changes in career expectations and roles. For example, the proportion

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[46] Cf. for example Linke, Hermann, "Abiturienten auf dem Arbeitsmarkt," in Bildungsexpansion und Beschäftigungsstruktur: Am Beispiel des Abiturientenproblems, Essen: Stifterverband für die Deutsche Wissenschaft, 1976, 43-46.

[47] Cf. Bundesminister für Bildung und Wissenschaft, op. cit, pp. 57-60.

of university graduates in the West German labor force as a whole increased from 2.9% in 1961 to 3.8% in 1970, and in business and industry from 1.0% to 1.6%.[48] This failed to produce any decisive changes. However, the first signs of unemployment among teachers in 1975[49] made it clear - if it had not been clear before - that the traditional link-up between education and employment is becoming questionable.

- As the result of demographical developments or as a long-term effect of rising educational aspirations, a sudden increase in university applications has raised concern about the employment outlook for graduates.[50] Whereas this sort of abrupt increase came about in many countries during the Sixties[51], at a time when throughout the world educational expansion was viewed with more optimism, it is not expected to hit West Germany until the second half of the 1970's.

- The general increase in unemployment clearly appears to add to graduates' difficulties in finding employment, although in most countries this does not seem to have affected their advantage over secondary school graduates.[52] In times of nearly full employment, and with a growing rate of graduates entering the labor market, employers tend to take on more graduates, for whatever reason, which often has the effect of dynamizing demand. On the other hand, in periods of economic crisis and high unemployment, employers are less

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48 Cf. Parmentier and Tessaring, op. cit., pp. 2 and 11. This figure omits graduates from technical colleges.

49 Cf. Köhler, Helmut and Jens Naumann, "Thesen zu Lehrerangebots- und -bedarfsanalysen," in Arbeitsgruppen des Instituts für Arbeitsmarkt- und Berufsforschung and Max-Planck-Institut für Bildungsforschung, op. cit.

50 This is given detailled treatment in Wissenschaftsrat, op. cit.

51 Cf. International Labour Office, Some Growing Employment Problems in Europe, op. cit.

52 Cf. Tessaring, op. cit.

inclined to adjust their recruitment criteria to the available supply of manpower; under these circumstances, college graduates have a harder time of finding employment if educational expansion continues unabated.

In West Germany economic difficulties, especially growing unemployment, have had the effect of concentrating public debate on such problems - not least because it was an increasingly conservative political climate and not just economic difficulties that was smothering the readiness to implement social reform. In this connection, it is once again becoming fashionable to seek to formulate restrictive assessments of needs on the basis of a new wave of manpower requirement forecasts. Despite considerable reservations about the methods and the approach's applicability in planning and policy making[53], these forecasts appear to be having a considerable impact on planning[54] in the sense: "we may not know just why, but we've got an oversupply in any event."

The more recent West German manpower requirements forecasts have sought to overcome some of the methodological and theoretical failings of earlier approaches.[55] Data from the census of 1970 have been incorporated to bring these

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[53] Cf. for example Böning, op. cit., and Rohde, Helmut, "Hochschule und Gesellschaft im Beziehungsfeld wechselseitiger Verantwortung," Deutsche Universitätszeitung, (No. 10, 1975), 399-402.

[54] Note the government's almost unreserved application of such prognoses in Bundesminister für Bildung und Wissenschaft, op. cit.

[55] On the claims raised by more recent studies cf. in particular Alex, "Absolventenangebot und berufliche Flexibilität", op. cit., and Hegelheimer, Armin, "Qualifikationsbedarf und berufliche Qualifikation," in U. Lohmar und G.E. Ortner, eds., op. cit. On examples of such studies see Footnote 8.

forecasts up to date and place them in a wider time-framework, and above all to produce a more differentiated statement about individual fields, educational levels, and districts. As a result of the increasing orientation toward particular areas of employment and their specific markets, interest is turning toward substitution processes and ways of gauging what latitude exists for such substitution. This is a result of the realization that there is by no means such a clear correlation between education and career as had been assumed by proponants of the traditional manpower requirements approach. This shift in emphasis can also be traced to the fact that planners have recognized the need to correlate individual prognoses with one another. In West Germany, the estimated need for law graduates, for example, ought to be adjusted to the need for social science graduates (since the one can be substituted for the other in many instances), so that the overall quantitative forecast calls for a university capacity that does not exceed what is considered politically and economically feasible.

On the long run research into substitution processes can give us insight into what actually goes on in the labor market and to this extent its findings could represent a more rational basis for labor market and education planning. Nonetheless, such approaches are still conceptually too imprecise, and there is a lack of methods for dealing with actual substitution processes as well as of concepts by which to explain and possibly affect them.

In connection with these new approaches and in an effort to come to terms with the qualitative aspects, attempts have been made to make forecasts more stringent by applying the findings of surveys and statistical studies of the distribution of qualified manpower in individual firms or branches. This, one should add, has not eliminated the widely noted, fundamental failings of the manpower requirements approach, and quantitative and qualitative aspects still remain to be integrated.[56] It remains to be seen whether it is possible to work out more valid bases for assumptions.

3.3 Problems of other approaches for determining qualifications requirements

As we have seen, the criticism of the restrictive manpower prognoses that are based on the manpower requirements approach justifiably focusses on the questionable theoretical, methodological and political implications of such an approach and suggests that it should be possible to regulate the relationship between education and occupation in quite a different way than is usually envisioned in such models. Such criticism cannot, however, offer the kind of practical alternatives that could function as guidelines for planning. Investigations which try to explain the

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[56] Cf. the critical discussion in Institut für Arbeitsmarkt- und Berufsforschung and Max-Planck-Institut für Bildungsforschung, op. cit.

relationship between education and occupation in other - and often more differentiated - terms cannot come close to the pseudo-accuracy of those manpower requirements forecasts.

As the following survey of selected alternative approaches relevant to the question of qualifications requirements will show, more differentiated analyses have tended more to raise new questions than they offer more reliable estimates of manpower requirements.

1. For a number of years there was considerable interest in the historical connection between education and economic growth, and quite a number of studies were made on the basis of "human capital" theories. Studies of this sort sought to measure correlation coefficients of either educational expenditures or the general educational level on the one hand and the rate of economic growth on the other. Or, they would calculate the relative weight of the traditional factors capital and labor plus the new factor "technological progress" in determining economic growth and the extent to which the components of "technological progress", science and education, must be seen as preconditions for just this technological progress and as the condition under which it can be translated into actual production.[57]

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[57] For readers on educational economics that proceed for the most part from the human capital approach, see Blaug, Mark, ed., Economics of Education, 2 Vols. Harmondsworth, Middlesex: Penguin, 1968; Bowman, Mary J., et al., Readings in the Economics of Education, Paris: Unesco, 1968; Hüfner, Klaus, ed., Bildungsinvestitionen und Wirtschaftswachstum: Ausgewählte Beiträge zur Bildungsökonomie, Stuttgart: Klett, 1970; and Hüfner, Klaus and Jens Naumann, Ökonomie - Eine Zwischenbilanz, Stuttgart: Klett, 1969.

As much as these studies drew attention to the economic importance of education, they failed to give planners any indication of where the growth-stimulating effect of expenditures for education ceases or when it was more likely that a cutback in capital investments or prolonged enrolment would produce "withdrawal symptoms" along with the problems this entails.

2. Educational economists, particularly in the English-speaking world, have devoted considerable attention to analysis of the relationship between education and income.[58] We shall give detailled attention to the cost-benefit approach and studies that have been based upon it. For one reason, they show parallels to certain sociological theories on the relationship between education and economic status. In addition, the debate about the cost-benefit approach sheds considerable light on the problems that are posed for research when the qualification and the status-distributive functions of education are not seen in relationship to one another and when sociological insights are not brought to bear on economic considerations of education.

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[58] The relation between this approach and studies on the connection between education and economic growth is discussed by Bowman, Mary J., "Schultz, Denison, and the Contribution of 'Eds' to National Income Growth," Journal of Political Economy, 72 (No. 5, 1964), 460-464; and Hüfner, Klaus, "Zur Planungsrelevanz des Ertrags-Kosten-Modells," in K. Hüfner and J. Naumann, eds., Bildungsplanung: Ansätze, Modelle, Probleme, Stuttgart: Klett, 1971, 235-253. For a survey of more recent research in the United States see Gordon, Margaret S., Higher Education and the Labor Market: A Volume of Essays Sponsored by the Carnegie Commission on Higher Education, New York: McGraw-Hill, 1974, 27-81. Cf. also Eckaus, Richard S., Ahmad El Safty, and Victor D. Norman, "An Appraisal of the Calculations of Rate of Return to Higher Education," in M.S. Gordon, ed., Higher Education and the Labor Market, op. cit, 333-371. A bibliography - with rather distorted annotations, however - is to be found in Windham, op. cit.

Cost-benefit analyses are used to determine, first, the individual rate of return when expenditures for higher education are increased at the same time as the period of time spent in education is prolonged. Second, they are used to calculate the overall social returns to educational investment, taking into account public expenditures in this sector. The logics of the latter calculation rest on a certain set of economic beliefs: Since on the one hand employers are believed to determine their employees' income on the basis of calculated returns, and the existence of different income levels is thought to reflect differences in the social value of work, and since, on the other hand, the individual's attitude toward education is felt to be determined in large part by his expectation of economic rewards, the considerable income advantage that graduates of relatively long courses of study enjoy is seen as evidence that all in all, educational expansion is socially profitable.

The question of the extent to which economic and other social rewards - what sociologists call socio-economic status - determine how individuals act, is a matter we shall reserve for later, since it is equally relevant to approaches for determining the status-distributive function of education. It should only be mentioned here in passing that an orientation toward status and income does not signify a purely utilitarian attitude toward education and professional qualification. Occupational status denotes a number of other factors such as conditions of work, action radius, and opportunities to apply one's knowledge, together with a considerable number of intangibles. But even if, to simplify things at the outset, we assume that people's behavior is oriented primarily toward material rewards[59], there still would have

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[59] Cf. in particular the study by Freeman, Richard B., The Market for College-Trained Manpower: A Study in the Economics of Career Choice, Cambridge, Mass.: Harvard University Press, 1971.

to remain doubt about the assumption that employers can in any way gear the educational system's output of qualifications to presumed manpower requirements.

It thus appears that any attempt to draw conclusions from the relationship between education and income about the requirement for qualifications is going to become more and more problematical, the more higher education expands. Any number of considerations and observations give growing reason for doubt that increasing expansion of higher education corresponds to the needs of the economy. Yet at the same time the income advantage of prolonged education remains relatively high.[60] International comparison has shown a negative correlation between the quota of higly qualified manpower and the rate of returns to prolonged education[61]; indeed, a notable decrease in the rate of returns has been registered in a number of countries where the increase in college graduates is considered excessive, measured against

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[60] It remains however an open question which rate of return can be seen as worthwhile, both in this context and in connection with the question of what effect education has on creating equal opportunity. The rates of return usually found in the United States are interpreted, as a rule, as relatively high. For another view cf. Taubman, Paul and Terence Wales, Higher Education and Earnings: College as an Investment and a Screening Device, New York: McGraw-Hill, 1974; and Taubman, Paul and Terence Wales, "Education as an Investment and a Screening Device," in F.T. Juster, ed., Education, Income, and Human Behavior, New York: McGraw-Hill, 1975, 95-121.

[61] Psacharopoulos, George, "The Economic Returns to Higher Education: A Review of the Experience in Britain and the United States," in H.J. Butcher and E. Rudd, eds., Contemporary Problems in Higher Education, London: McGraw-Hill, 1972, 361-371; and Psacharopoulos, George, Returns of Education, Amsterdam: Elsevier, 1973. For an example of studies into individual countries - apart from the United States and England - see Danielsen, Albert L. and Katsuji Okachi, "Private Rates of Return to Schooling in Japan," Journal of Human Resources, 6 (No. 3, 1971), 391-397.

presumed demand.[62] The general impression, however, is that income advantages are surprisingly little affected. One reason for this is that such fluctuations appear to be quite short-lived, as a rule.[63] Looking at the way university graduates are actually employed, many experts gain the impression that there does indeed exist a tendency toward overqualification.[64] All in all, this adds fuel to the doubts that remaining income advantages serve to indicate that highly qualified manpower is usefully employed.

The discussion about the problems this raises centers on a number of topics, four of which we will discuss in detail:[65]

a) The finding that income advantages resulting from prolonged education are subject only to brief fluctuations, while on the long run the rate of returns to education remains largely constant, strengthens the assumption that in the larger context of structural social inequality, the market-regulation of the

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62 Freeman, "Overinvestment in College Training?", op. cit.; Freeman, Richard and J. Herbert Hollomon, "The Declining Value of College Going," Change,7 (No. 8, 1975), 24-31, 62. Changes in income structure in Japan also point to a similar development.

63 Mincer, Jacob, Schooling, Experience, and Earnings, New York: Columbia University Press, 1974; Mincer, Jacob, "Education, Experience, and the Distribution of Earnings and Employment: An Overview," in F.T. Juster, ed., Education, Income, and Human Behavior, New York: McGraw-Hill, 1975, 71-93.

64 Cf. the discussion in Blaug, Mark, "The Correlation between Education and Earnings: What Does it Signify?", Higher Education, 1 (No. 1, 1972), 53-76, as well as the conclusions presented in Freeman and Hollomon, op. cit. For a critical response to the assumption that there exists a tendency toward overqualification cf. Hartung and Nuthmann, op. cit.; Heindlmeyer, et al., op. cit.

65 For further considerations on the connection between education and income in general and its relationship to qualifications requirements and qualifications supply cf. the various analyses presented in M.S. Gordon, ed., Higher Education and the Labor Market, op. cit.

qualifications supply is only of secondary importance. Although changes in income level are influenced by the relationship between supply and demand in the labor market, incomes fluctuate and tend to settle into patterns that defy the logic of the market mechanism.

This indicates a relative constancy in the structure of social inequality that may prove economically advantageous to the extent that under certain circumstances it works to stimulate better performance and to promote greater loyalty and conformity both among the less privileged, who hope to thereby improve their lot, and among the more advantaged, who count on a bigger share. We can therefore assume that the income structure is affected to a greater extent by such factors than by any presumed discrepancies between required and supplied qualifications.

b) As a means of backing up their position, advocates of the cost-benefit approach often like to point to "intervening variables" which interfere with the smooth functioning of the market mechanisms that are considered to be at the root of all things. As instances of such intervening variables they point to

- supply and demand cycles which come about as a result of a long process beginning with a change in incentives and ending with the supply of a corresponding set of qualifications;
- lack of transparency in labor market processes;
- the existence of different criteria for remuneration in public employment;
- traditionalistic business practices;
- labor union influence on the wage structure, and finally
- the fact that higher education is largely financed by public means.

The analytical conclusion is often drawn that the concept of "social returns" is an appropriate one so far as market processes determine the relationship between education and occupation.[66] Or, planners are urged to eliminate the intervening variables - to do away with public financing in higher education, for example. For then, so goes the reasoning, the student population would automatically shrink to meet the needs of the occupation system.[67] Instead of asking whether the economic models do justice to the complexity of the situation, adherents of this approach complain about the failure of reality to adjust to the economic models.[68]

c) In addition, it hardly seems likely that young people - even assuming they are primarily motivated by the prospect of material rewards - will be prepared to give up the goal of higher education just because the prospects of a better income have dimmed to some extent. For in contrast to the producer or businessman who is familiar with fluctuating market conditions and has the means to adjust to them, the student who chooses not to proceed into higher education automatically comes out on the short end of the deal, with a life-long disadvantage he can hardly hope to overcome. Divergent interests exist on the labor market between employers as buyers of the commodity "labor" and those who seek to sell their labor - divergent interests which as a rule cannot be reconciled by means of a graduated system of

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66 Blaug, "The Correlation between Education and Earnings: What Does it Signify?", op. cit.

67 Cf. the bibliographical essay in Windham, op. cit.; also von Weizsäcker, Carl Christian, "Problems in the Planning of Higher Education," Higher Education, 1 (No. 4, 1972), 391-408.

68 Cf. for instance Windham, op. cit., pp. 197 f.

rewards.[69] The consequence of this conflict of interest is likely to be more people pressing for admission to the universities than employers consider sensible, provided that students see through the education-employment nexus and that no serious curbs are set on the financing of higher education. In times of economic difficulty, on the other hand, students who choose not to go on into higher education appear to be motivated in their decision more by immediate financial worries than by prospects for future earnings.[70]

d) Finally, educational economists have been debating at length why employers continue to guarantee college graduates income advantages while at the same time maintaining that they can get along with fewer numbers of highly qualified employees. There appears to be a consensus that highly qualified workers can more easily replace the less qualified ones than the other way around, and that therefore college graduates are likely to have an income advantage even in the event of an oversupply. It is also generally assumed that the increase in college graduates throughout the course of educational expansion has been greater than have been the changes that have taken place in the structure of qualifications.[71] However, there are quite divergent explanations for the economic reasoning that lies behind the continued practice of giving college graduates an income advantage. On the one hand it is contended that contrary to their public statements employers continue to make use of the higher qualification

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69 On fundamentally divergent interests in the labor market cf. Lutz, Burkart, Rainer Schultz-Wild, and Werner Sengenberger, Arbeitsmarktstruktur und Arbeitsmarktbedingungen: Ansätze zu einem erweiterten Arbeitsmarktmodell, München: Sonderforschungsbereich 101 der Universität München, 1974.

70 Cf. Gordon, op. cit., pp. 4-6; also Piachaud, David, "The Economics of Educational Opportunity," Higher Education, 4 (No. 2, 1975), 201-209.

71 For one relevant empirical analysis see Rawlins, V. Lane and Lloyd Ulman, "The Utilization of College-Trained Manpower in the United States," in M.S. Gordon, ed., op. cit, 195-235.

which an increased number of graduates supply.[72] The other camp insists that employers only continue to reward the educational degree because they want to match a hierarchy of positions to a hierarchy of abilities - even if this results in overqualification at many levels - and they expect higher education to produce a particularly good selection[73] - a thesis many economists do not consider plausible because it makes education appear to be little more than an elaborate and expensive selection mechanism.[74] In any case, many educational economists argue that along with other "intervening variables" education's certification or filter function[75] promotes an unprofitable expansion of education. The relationship between education and employment - given presumed overqualification - is thus often pejoratively labelled "credentialism".

Not all scholars concerned with this problem are content to accept reality as being shaped by means of returns-calculations to the extent of seeing the reward for certification as evidence of the utility of the qualifications thus certified, nor do all of them view reward for "unessential" qualifications as evidence of irrational behavior on the part of employers.

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72 Cf. Blaug, "The Correlation between Education and Earnings: What Does it Signify?", op. cit.

73 This comes out particularly clearly in Berg, Ivar, Education and Jobs: The Great Training Robbery, New York: Praeger, 1970; and Thurow, Lester C., "Measuring the Economic Benefits of Education," in M.S. Gordon, eds., op. cit. A number of studies assume, however, that credentialism is no contradiction to a productivity-oriented utilization; cf. Taubman and Wales, op. cit., for example.

74 Cf. the analysis in Blaug, "The Correlation between Education and Earnings: What Does it Signify?", op. cit., and the bibliographical notes in Windham, op. cit., p. 185.

75 Cf. the methodological study by Arrow, Kenneth J., "Higher Education as a Filter," in Conference intergouvernementale sur l'utilisation du personnel hautement qualifé (Venise, 25-27 Octobre 1971), Paris: OECD, 1971, 1-39.

On the contrary, it would seem possible to view employer behavior as economically rational precisely because of the existing market's "imperfections".[76] In that event these "imperfections" would have to be examined systematically to determine what function educational certification has for the economic system even under the circumstance that it is no longer possible to establish an equilibrium between required and supplied qualifications.[77]

Thus, the cost-benefit approach gives us no clear-cut way to estimate how the development of the education system relates to the qualification requirements of the occupation system. However, the peculiar logic of this approach together with the difficulties involved in using it to explain the development of education and incomes, force one to conclude that what is needed is an investigation of the relationship between education and incomes in the context of a more complex analysis of the functions of the educational system.

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[76] Cf. Rawlins and Ulman, op. cit.

[77] Considerations of this sort are to be found in Leibenstein, Harvey, "Economics of Skill Labelling," in J.A. Lauwerys and D.G. Scanlon, eds., Examinations: The World Year Book of Education, London: Evans, 1969, 268-271; Bowles, Samuel and Herbert Gintis, IQ in the US Class Structure, Cambridge, Mass.: Harvard University Press, 1972; Hartung and Nuthmann, op. cit.; Williams, Gareth, Credentialism and the Labour Market: Keynote Address, 3rd International Conference on Higher Education at the University of Lancaster, 1-5 September, 1975; and Teichler and Teichler-Urata, op. cit; also to be considered are the socializing effects of higher education - cf. Bowles, Samuel and Herbert Gintis, "IQ in the United States Class Structure," in A. Gartner, C. Greer, and F. Riessman, eds., The New Assault on Equality: I.Q. and Social Stratification, New York: Harper and Row, 1974, 7-84; furthermore, the advantage of a limited measure of competition in the education system: cf. in this context the discussion in Teichler and Teichler-Urata, op. cit. These questions will be treated more fully in Chapter 5.

3. In addition, concepts and studies of the relationship between technological-economic developments and the organisation of work are important for any assessment of qualifications requirements. Most manpower requirements forecasts assume - at least for the private sector of the economy - that manpower requirements and, with these, the number of available positions for graduates reflect technological and economic requirements since - so goes the argument - the organisation of work is designed to facilitate optimal allocation of manpower in the interest of overall economic growth.

There are several approaches - among them industrial sociology, occupational sociology and political economy - which are directly concerned with the connection between technological-economic development and qualifications requirements as well as with trends in the organisation of work and the structure of occupations. If nothing else, these approaches show that there is by no means a clear-cut connection between technostructure, organisation of work and the qualification structure in a given workplace, and what connection there does exist is not the clear result of any orientation toward economically rational utilization of manpower or profit maximization.

Correspondingly, post-war studies proceeding from the notion that manpower requirements are largely determined by technological and industrial developments, have also come to very different conclusions about whether educational expansion is warranted.[78]

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[78] These considerations have played a much greater part in discussion in West Germany on the relationship between education and occupation than they have in the Anglo-Saxon countries. In the chapter that follows we will focus on German literature, as it has formed the basis of our research project.

It was a particularly wide-spread thesis in the Sixties that technological progress was leading to higher qualification requirements in most occupational sectors.[79] In educational planning and policy-making the causal chain was reversed: there it was contended that society must raise the general level of education if it is to avoid falling behind in international economic competition.[80] In constrast, observation of developments in the organisation of work in several economic sectors and in employment statistics has led some experts to conclude that qualifications requirements were tending to polarize[81]: the requirement for highly qualified manpower was growing, but more slowly; that for unskilled or semi-skilled labor growing at a faster rate, whereas demand for mid-level qualifications was slackening. In addition it is occasionally maintained that occupational research has produced findings

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79 This thesis is held, for example, by Fricke, Else, Werner Fricke, and Manfred Schönwälder, "Qualifikation und betriebliche Organisation: Zum Problem der Analyse von Qualifikationen im Arbeitsprozeß," Soziale Welt, 24 (Nos. 2-3, 1973), 219-241; Altvater, Elmar, "Krise und Kritik: Zum Verhältnis von ökonomischer Entwicklung und Bildungs- und Wissenschaftspolitik," in S. Leibfried, ed., Wider die Untertanenfabrik: Handbuch zur Demokratisierung der Hochschule, Köln 1967, 52-66; Hund, Wulf D., et al., "Qualifikationsstruktur und wissenschaftlich-technischer Fortschritt," Blätter für deutsche und internationale Politik, 18 (No. 10, 1972), 1084-1099, (No. 11, 1972), 1195-1203.

80 Cf. Picht, Georg, Die deutsche Bildungskatastrophe, op. cit.

81 Cf. Kern, Horst and Michael Schumann, Industriearbeit und Arbeiterbewußtsein: Eine empirische Untersuchung über den Einfluß der aktuellen technischen Entwicklung auf die industrielle Arbeit und das Arbeiterbewußtsein, Vol. 1, Frankfurt a. M., 1970 (RKW-Schriftenreihe, Vol. 8); Baethge, Martin, et al., Produktion und Qualifikation: Eine Vorstudie zur Untersuchung von Planungsprozessen im System der beruflichen Bildung, Hannover: Schroedel, 1975.

which prove that further educational expansion is superfluous in terms of the manpower needs of the occupation system.[82]

Such thinking is often accompanied by the assumption that the general level of education must be raised to meet the "minimal requirements of civilization"[83] - be it that society has become more complex, be it that opportunities are dwindling for acquiring qualifications and social skills at the workplace and this deficiency must be compensated by formal education. There also exists the notion that there is indeed a considerable discrepancy between technological progress together with its potential for improving the organisation of work on the one hand, and the actual way qualifications have developed on the other. Thus, it is assumed that too slow an overall increase in the qualification niveau of the labor force is a great impediment to economic growth and technological progress.[84]

A third category of approaches is concerned with the significance of political decisions in determining the relationship between technological-economic development and qualifications requirements. Certain Marxist scholars, for example, assume that capitalist concern with maximizing profits takes the shape of systematical efforts to organize work on a relatively low qualification level; only in socialist societies, they contend, is it possible to raise the qualification level and thus open the way to maximal economic and technological

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82 Lutz, Burkart, "Zum Verhältnis von Bildungssystem und Beschäftigungssystem," in Stifterverband für die Deutsche Wissenschaft, ed., Bildungsexpansion und Beschäftigungsstruktur: Am Beispiel des Abiturientenproblems, Essen: Stifterverband für die Deutsche Wissenschaft, 1976, 31-39; Lutz is inclined to draw this conslusion; in contrast see Lutz, Burkart, "Arbeitskraft als Wachstumsengpaß," in Rationalisierungskuratorium der Deutschen Wirtschaft, ed., Produktivität und Rationalisierung: Chancen, Wege, Forderungen, Frankfurt a. M.: Fischer, 1971, 81-85.

83 Cf. Lutz and Krings, op. cit.

84 Jánossy, Franz, Das Ende der Wirtschaftswunder, Frankfurt a. M.: Verlag Neue Kritik, 1969.

progress.[85] The importance accorded the socio-economical determination of work organisation and job structure is even more evident in the contention that the division of labor is determined far less by technological and economic requirements than by domination, i.e. which forces in society are in a position of control.[86]

Finally, a great number of studies point to the fact that there is a relatively large amount of political scope for weighing various qualification strategies while at the same time pointing to limits to the determinability of occupational roles.[87]

In analyzing the various arguments and the evidence offered in support of the various interpretations of the relationship between technological-economic development and the qualification structure, two problems emerge again and again:

To begin with there is a tendency to infer an overall pattern of development from findings that apply only to specific

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85 Cf. for example Altvater, Elmar and Freerk Huisken, Materialien zur politischen Ökonomie des Ausbildungssektors, Erlangen: Politladen, 1971; Knauer, Arnold, Harry Maier, and Werner Wolter, eds., Bildungsökonomie: Aufgaben - Probleme - Lösungen, Berlin (East): Verlag die Wirtschaft, 1968.

86 Lenhardt, Gero, Berufliche Weiterbildung und Arbeitsteilung in der Industrieproduktion. Frankfurt a. M.: Suhrkamp, 1974.

87 Cf. for example Hartung, Nuthmann, and Winterhager, op. cit; Armbruster, Wolfgang, et al. "Expanding Use of Highly Qualified Manpower: Conditions and Consequences," in Conference intergouvernementale sur l'utilisation du personnel hautement qualifé (Venise, 25-27 Octobre 1971), Paris: OECD, 1971, 1-39; Lutz and Krings, op. cit; Mertens, "Der unscharfe Arbeitsmarkt: Eine Zwischenbilanz der Flexibilitätsforschung," op. cit.; Mertens, Dieter, "Schlüsselqualifikationen: Thesen zur Schulung für eine moderne Gesellschaft," Mitteilungen aus der Arbeitsmarkt- und Berufsforschung, 7 (No. 1, 1974), 36-43. Cf. also the review of the debate in Kühlewind, Gerhard and Manfred Tessaring, Argumente für und gegen eine beschäftigungsorientierte Bildungspolitik: Eine Literaturanalyse, Nürnberg: Gutachten im Auftrag der Kommission für wirtschaftlichen und sozialen Wandel, 1974, mimeogr.

aspects of the technological development, the occupational structure and the educational system. Second, a factual description that in one context may be altogether correct and fitting is often used as evidence that this one specific relationship between technological-economic development and education is the necessary one. Attempts to overcome these weaknesses may serve to neutralize the controversies somewhat; but any statement on whether a general tendency toward overqualification exists as a result of educational expansion will only become more indeterminate as a result.

There does however seem to be agreement among the approaches we have discussed in section 3 that the higher the occupational position is, the more difficult it is to make any clear-cut statement about the adequacy of specific qualifications relative to the requirements of a given position. The higher a given set of qualifications is, the less likely there are to be limitations set on them by technologies, organizational formalities or the nature of the product involved.[88] This however makes it difficult to state for certain whether in view of technological-industrial developments there exists an oversupply of highly qualified manpower.

4. Just as it is impossible for scholars to make any conclusive statement about qualifications requirements and expected trends, so, too, there is growing doubt that employers are able to identify their own "demand" for specific qualifications. Although it is frequently assumed that if anybody knows what a given enterprize needs, then it will be that organization's own management, there is considerable evidence

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[88] This line of argument is given particularly detailled treatment in Lutz and Krings, op. cit., as well as in Armbruster, Wolfgang, et al., Expansion und Innovation: Bedingungen und Konsequenzen der Aufnahme und Verwendung expandierender Bildungsangebote, Berlin: Max-Planck-Institut für Bildungsforschung, 1971.

that employers' assessments not give a picture of their genuine manpower requirement

These difficulties are reflected in the way employers express their own manpower needs. Personnel managers often have only a very unclear idea of what they actually need. Moreover, their planning is often only short-term in deference - it would seem - to the vagaries of the market mechanism, and it is inadequate in terms of the qualification needs of society. What this amounts to is a perpetuation of the existing state of affairs.[89] Moreover, their statements about the skills and abilities they require are often highly fragmental. Indeed, under the impression that the supply of highly qualified manpower is plentiful, employers may feel inclined to seek special qualifications or concentrate on qualities that are "peripheral" to the occupational role, in particular specific social skills or other exceptional qualifications.[90] In addition, it can be assumed that the discussion about qualifications requirements produces stereotypes which in turn affect the way qualifications are perceived; this probably explains the demand for less "theoretical" and more "practical" training.

This demand for a practical orientation in training is upheld even though what is actually sought and remunerated in the concrete situation are those "theoretical" foundations of occupational role fulfilment which insure that qualifications, once acquired, do not lose their validity, and that

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89 Cf. the empirical study by Gerstenberger, Wolfgang, Gernot Nerb, and Silke Schittenhelm, "Unternehmerische Urteile und Antizipation über den Bedarf an Arbeitskräften," Mitteilungen des Instituts für Arbeitsmarkt- und Berufsforschung, (No. 9, 1969), 671-697.

90 Cf. Hartung and Nuthmann, op. cit., 108-118.

the employee is capable of relearning and can respond "correctly" to unanticipated situations. Thus it would appear that what lies behind the demand for more "practical" abilities, often mistaken for a statement on qualification requirements, is a desire for less ambitious employees.

Finally, differences from country to country in what employers require suggest that culturally specific customs and traditions are an important factor.[91]

Employers' ambivalent attitude toward reform in higher education is further testimony to the fact that their notions about what they require are very vague. In many countries it can be observed that employers demand that limits be placed on educational expansion in order to prevent an oversupply of qualified manpower, while at the same time giving preference to applicants with the higher qualifications.[92]

As explanation for this contradiction between employers' standpoint on education and their actual recruitment practices, it is generally maintained that there is a discrepancy between the interests of the economy as a whole and particular interests as they are created by competition between individual

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[91] Cf. the references to this in the comparative studies by Azumi, Koya, Higher Education and Business Recruitment in Japan, New York: Teachers College Press, 1969, on Japan and the United States; Dore, Ronald P., British Factory - Japanese Factory: The Origins of National Diversity in Industrial Relations, London: George Allen and Unwin, 1973, on Great Britain and Japan; and Granick, David, "Differences in Educational Selectivity and Managerial Behaviour in Large Companies: France and Britain," Comparative Education Review, 17 (No. 3, 1973), 350-361, on France and Great Britain.

[92] This issue lies at the root of the discussion in Blaug, "The Correlation between Education and Earnings: What Does it Signify?", op. cit. The ambivalence is given detailled treatment, using the example of Japan, by Teichler and Teichler-Urata, op. cit.

enterprizes. This explanation appears first on view to have a certain plausibility if one assumes that what is involved is a risk strategy, reflecting employers' uncertainty about what their needs actually are, now and in future.[93] Although this assumption helps to explain why employers keep their ideas on education policy from influencing their recruitment behaviour and vice versa, it nevertheless fails to resolve the contradiction. For if such a strategy should actually prove advantageous to the individual enterprizes, then an overall upgrading of the qualification niveau would seem appropriate.

In addition, it is not yet known in most fields to what extent occupational roles can be filled by persons whose training does not correspond to that conventionally required for a given job.[94] Indeed, there exist major differences from one country to the next in the way higher education relates to occupation. For example, in those countries where there is traditionally a relatively clear correlation between field of study and field of occupation, these traditions determine the presumed qualifications requirements. In other societies, ideas about substitution systematically enter into considerations about manpower requirements - be it that it is generally felt that the prerequisites for a given occupation are acquired only in part in the corresponding course of study[95], be it that employers are interested in

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93 Cf. Mertens, Dieter, "Einige Anmerkungen zum Strukturfatalismus in der Bedarfsdiskussion und zu den Möglichkeiten, ihn zu Überwinden," in Arbeitsgruppen des Instituts für Arbeitsmarkt- und Berufsforschung and Max-Planck-Institut für Bildungsforschung, op. cit.

94 On the discussion of substitution possibilities cf. Kaiser, "Zur Flexibilität von Hochschulausbildungen: Ein Überblick über den Stand der empirischen Substitutionsforschung," op. cit.

95 Cf. Teichler, Das Dilemma der modernen Bildungsgesellschaft, op. cit.

particular in general qualifications.[96] As educational expansion proceeds, these differences from country to country seem to be lessening, however. For expansion has led employers in the first-named group of countries to employ increasing numbers of people whose qualifications did not correspond to original expectations. This experience with substitution possibilities has subsequently figured to some extent in notions about requirements.[97]

Finally, it often happens that job performance problems prompt experts and policy-makers alike to draw questionable conclusions about what the educational system should be producing. The following aspects of the problem should be taken into consideration:

- What is often understood by qualification is simply the ability to carry out a particular occupational activity. This however does not involve any systematical inference from desired job performance to the configuration of abilities an employee would be required to possess in order to be able to produce the desired occupational behavior.

- There is a tendency to jump to the conclusion on the basis of the degree of specialization required for a particular job or on the basis of shifts in emphasis in the qualifications required, that training should be either more general or more specialized. Too little attention is given to the transferability of what is learned. This applies in particular to the sphere of higher education. On the other hand, the German educational tradition supports

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96 Cf. Little , Angela and John Oxenham, Credentialism: Speculations on Career Handbooks and Newspaper Advertisements, Paper presented at the 3rd International Conference on Higher Education at the University of Lancaster, 1-5 September, 1975.

97 Cf. the preceding discussion on "unanticipated" demand; see in particular Hartung, Nuthmann and Winterhager, op. cit., pp. 17-38.

the thesi[illegible] t[illegible] academi[illegible] udies repre[illegible]nt the best preparation for [illegible]ot[illegible] highly sp[illegible]ialized and general activities.[98]

- It is often forgotten that congruity of work and education has its limits in the nature of education, which cannot duplicate the actual work situation. When for example a college graduate discovers that he can apply only part of his knowledge in his job and complains of having trouble getting along with subordinates and colleagues[99], he appears to be expressing essentially the same thing employers are often heard to demand: that training relate more closely to its actual application. As justified as this demand may be, the fact is generally overlooked that a "qualification paradox"[100] is to some extent unavoidable, in particular in the case of highly qualified manpower. On the one hand, the individual has to acquire knowledge and skills without knowing whether they can ever be applied, but which give him the resources he needs to be able to perform important non-routine jobs as they come up. On the other hand, not every occupational activity can be anticipated by college training, and formal education is not always the best guarantee that a person is capable of coping with every situation.

5. This latter problem leads into an additional one: the relationship between acquired qualifications and job performance. Manpower requirement forecasts go on the assumption that job performance is as a rule satisfactory. It is assumed furthermore that more highly qualified personnel

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98 Cf. Nuthmann, Reinhard, "Annahmen zur Veränderung der Qualifizierungsprozesse hochqualifizierter Arbeitskräfte und ihrer Verwendung im Beschäftigungssystem," in G. Faltin and O. Herz, eds., Berufsforschung und Hochschuldidaktik II, Hamburg: Arbeitsgemeinschaft für Hochschuldidaktik, 1974, 9-34.

99 Cf. Deutsche Gesellschaft für Personalführung, Orientierungsprobleme von Hochschulabsolventen beim Eintritt in betriebliche Praxis, Neuwied and Berlin, 1972.

100 Armbruster, et al., Expansion und Innovation, op. cit., p. 35.

are occasionally not willing or indeed poorly equipped to carry out simpler tasks. One occasionally also hears the view that although continuing expansion would lead to improved job performance in many areas, its costs in terms of capital investment are too high in relation to the returns. These contentions are countered by the argument, first, that it is a difficult matter in any event to determine what training is appropriate to the requirements of a given job. Second, it is argued that many employers have simply become accustomed to unsatisfactory job performance.[101] This, they say, is to some extent accepted as a necessary evil in order to insure that employees continue to display a proper subordinate attitude. Third, it is argued that there is no such thing as "overqualification" in a great many occupations; this applies in particular to those areas where social skills play an important part, and to those occupations which require training in the social sciences. Fourth, it is said that under favorable organizational conditions the higher qualifications produce more personal initiative and creativity or provide the basis for independent adjustment to externally created change.

6. Finally, assumptions about employee satisfaction enter into the discussion about the nature of the relationship between training and occupation. Thus, it is an open question whether educational expansion creates a discrepancy between job expectations and job reality, thus creating disappointment[102] and undermining readiness to carry out less meaningful or impressive tasks - or, whether, on the contrary, expansion actually promotes interest in work.

In reply to restrictive manpower requirement concepts, it is stressed that occupational satisfaction does not depend

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101 This thesis is given detailled treatment by Heindlmeyer, et al., op. cit.

102 This is emphasized in particular by O'Toole, James, "The Reserve Army of the Underemployed," Change, 7 (No. 4, 1975), pp. 26-33, 63, and (No. 5, 1975), pp. 26-33, 60-63.

on any particular substantive relationship between training and actual occupation, but rather that occupational expectations are largely connected with employment prospects. There are also indications that job satisfaction is determined to a larger extent by the way occupational rank correlates with educational level than by the way education and occupation correlate in substantive terms, and that we are experiencing a long-term trend toward increasing status orientation.[103]

Empirical studies on the suitable employment of university graduates have been carried out in West Germany and Japan in the form of employer questionnaires and in France and the United States in the form of surveys conducted among university graduates.[104] No clear-cut conclusions can be drawn from these studies: for one thing, the notion of "suitability" is applied most frequently to the relationship between training field and occupational field; it is apparently more difficult to assess the complexity of requirements, difficulty of the job involved, decision-making powers and other such occupational role characteristics which characterize the job hierarchy. Another point is that such inquiries have the effect of letting such a far from unanimous set of views as those polled appear to settle the theoretically unresolved question of the "suitablility" of education to occupation.

Similar conceptual differences exist in the evaluation of future trends in production and the labor market together with their consequences for higher education policy.

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[103] This thesis is explained in detail by Teichler, "Struktur des Hochschulwesens und 'Bedarf' an sozialer Ungleichheit," op. cit.

[104] Cf. references to this in Tessaring and Werner, op. cit.

3.4 Some conclusions from the debate on qualifications requirements

1. Neither employers nor for that matter college graduates themselves are altogether clear about just what is required in the way of qualifications. Notions tend to be vague; it is very difficult to draw a line separating adaquate qualification from either over- or underqualification. Furthermore, requirements ideas tend to reflect specific cultural traditions of recruitment and have been in the process of change ever since education began expanding.

2. There exist no clear-cut notions about the demand for university graduates in terms of specific qualifications. Conceptions of what comprises an adequate substantive correlation between training and occupation are, as a rule, shot through with assumptions about the connection between education and position in the occupational hierarchy.

3. Notions about requirements have been in a dynamic state for some time, and there is no absolute, objective limit to this process in sight. This means that there is no way to foresee the point where continued expansion of higher education could result in graduates having no prospects of meaningful employment. In many occupations there has been tacit acceptance of the fact that job performance is not optimal; it is conceivable that if more training were required, employees in many occupations would display a higher degree of job competence. In addition, there are a number of changes that could be made in the organisation of work - a tendency toward a more horizontal structure of job roles, for example - and in occupational roles or careers - perhaps more variation in the work one does over the course of a working life - changes which would justify requiring more and better education for everyone.

4. As a general rule, employers in industrialized countries are inclined to believe that there exist oversupplies of highly qualified manpower and general overqualification in those occupations for which at least mid-level education is required. That means that employers generally believe that the quality of work would remain essentially the same even if the proportion of college graduates in the working force as a whole were smaller. This applies to countries with very widely ranging proportions of graduates.

5. In reality, the occupation system in such industrialized countries is largely capable of absorbing the growing supply of highly qualified manpower. Although in some countries the labor market is temporarily affected in the case of certain fields or in the event of a particularly rapid overall expansion of higher education, the occupation system is able, as a rule, to absorb the growing number of graduates without particular difficulties. Unemployment is relatively rare among university graduates and its rate is in any event lower than among people with less education. In addition, university graduates can generally count on receiving higher and more secure positions than the less educated.

It should be noted (reserving detailled discussion for a later chapter) that what plays a vital part in the absorbtion process is not just the objective requirement for qualifications and the profitable application of once-earned qualifications, but also the social mechanisms that are designed to secure and justify privilege.

6. However much the occupation system's rewards are influenced by prevailing ideas of what qualifications are needed, it is not their function to encourage or discourage people to take advantage of education in line with current manpower requirements notions. Measures for reducing the discrepancies that exist between the supply of highly qualified manpower and

presumed demand never go so far as to sever or substantially loosen the tie that exists between educational rank and occupational status.

The strains which develop over the course of educational expansion in the relationship between training and occupation cannot, therefore, be seen as the necessary result of a substantive discrepancy between the two.

In showing that qualifications requirements are more tentative than is generally assumed, we may pave the way to additional misunderstandings. This applies in particular to the discussion on political consequences, where the question of qualifications requirements can easily lead to a polarization of positions into voluntaristic and deterministic standpoints.

On the one hand - according to the voluntaristic point of view - such insights about the tentative nature of qualifications requirements are used to justify more or less excluding considerations of job requirements from both the quantitative and qualitative aspects of education planning. The thesis is often raised in this context that the manpower needs discussion tends to ignore the socially most relevant goals of education.[105] The danger in such thinking is that concrete social factors are neglected in curricular development and in teaching, leaving the graduate - unprepared as he is - to cope as best he can with the contradictions that exist between education and subsequent occupation. On the other hand, - now from the deterministic point of view - the mere suggestion that requirements are tentative is decried as a sign of social irresponsibility and antagonism toward

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[105] Cf. for example Carter, C.F., "Costs and Benefits of Mass Higher Education," Higher Education, 2 (No. 1973), 206-213. The criticism voiced by Bowen, Howard R., "Manpower Management and Higher Education," Educational Record, 54 (No. 1, 1973), 5-14, also lends itself to this sort of misinterpretation.

planning.[106] In their preoccupation with qualifications and in defense of the criteria they prefer to use in analysis and planning, the "determinists" often disqualify other educational achievements as ephemeral.[107]

On the basis of these considerations, we can justifiably counter the deterministic position by stating that policy makers do enjoy "relative autonomy"[108] in shaping the education system.

Turning to the voluntaristic position, it ought to be pointed out that even though it may not be possible to adequately justify ideas about what qualifications are needed in terms of technological and economical necessity, this by no means makes them politically ineffectual. Political control and interest in stabilizing social hierarchies have an impact on the shape and scope of education not only by means of direct pressure brought to bear by specific interest groups; the limits placed - it is thought necessarily - on the growth of an educational system by market forces, traditional notions about what comprises a proper occupation, and a lack of imagination for devising alternative ways of organizing work (as a result of prevailing work organisation) all together create public attitudes which enter into a society's views on the qualifications it requires.

One should also be careful not to let the misconception develop that society requires no more from education than that it provide specific supplies of qualifications.

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106 Cf. for example Hegelheimer, Armin, "Bildungsbedarf und berufliche Qualifikation," in U. Lohmar and G.E. Ortner, eds., op. cit., pp. 72-91.

107 Cf. Freeman, Richard B., "On Mythical Effects of Public Subsidization of Higher Education," in L.C. Solmon and P.J. Taubman, eds., Does College Matter?, New York: Academic Press, 1973, 321-328; and the discussion on investment criteria and higher education in Windham, op. cit., pp. 187-192.

108 Cf. Bourdieu and Passeron, Die Illusion der Chancengleichheit, op. cit.; see also Armbruster, et al., Expansion und Innovation, op. cit.

Studies that have too narrow a data-basis and proceed from very specific assumptions and questions tend to produce analyses that are flawed by rash generalizations and too far-reaching conclusions. In this connection, the findings and arguments we have presented up to this point demonstrate that there is no tenable basis for the contention that the tie between education and employment consists of nothing more than the education system being "functionally subordinated" to the skill requirements of the occupation system. Such criticism should not, however, be viewed as justification for an analytic model which postulates a "functional dissociation" of education from the occupation system.[109] For these conclusions about the tentative nature of skill requirements and consequently about what numbers and type of highly qualified workers would be suitable are the product of two specific circumstances: first the great variation in the way university training relates to occupation in the highly industrialized countries, and second, the difficulty of substantiating the various theses on qualification needs. The fact is, however, the current level of technological and industrial development does permit a certain measure of flexibility in the employment of university graduates, which leads to the development of quite diverse assumptions about the requirement for highly qualified manpower.

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109 For misinterpretations of earlier studies conducted by our project group, cf. Asendorf-Krings, et al., op. cit., p. 4, as well as Faltin, Günter and Otto Herz, "Berufsforschung und Hochschuldidaktik," in G. Faltin and O. Herz, eds., Berufsforschung und Hochschuldidaktik I: Sondierung des Problems, Hamburg: Arbeitsgemeinschaft für Hochschuldidaktik, 1974, No. 1, 51-58, esp. pp. 13-4.

This should not be taken to mean that specific fears of an oversupply of university graduates can be dismissed as mere unfounded speculation or politically expedient pessimism. The absorbtion and employment of university graduates poses problems that differ from one society to the next. There are other factors whose social relevance cannot be relativized by developments in similarly developed countries and which prove to be real forces - obstacles, for example, to the expansion of higher education.

The following factors account in large part for divergent patterns of development in industrial societies:

1. In a number of industrial societies the intellectual elite has historically had very little to do with the economic life of the nation. This has had a long-lasting effect on the recruitment of highly qualified personnel for business and industry[110]: advancement is more dependent on experience than is elsewhere the case, and employers tend to be more skeptical about university graduates' qualifications. Universities gear curricula less to the expectations of business and industry; and graduates are more inclined to view employment in private enterprise as unsatisfactory.

2. In some societies, traditional forms of training as well as career images emphasize the function of university education as direct professional preparation; in other countries, on the other hand, the traditional emphasis is on general education and the acquisition of basic skills

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[110] Ben-David draws attention to the importance of the pre-industrial relationship between university and economic life for today's understanding of the types of employment that are appropriate for university graduates: Ben-David, Joseph, "The Growth of the Professions and the Class System," in R. Bendix and S.M. Lipset, eds., Class, Status, and Power: Social Stratification in Comparative Perspective, 2nd edition, London: Routledge and Kegan Paul, 1967, 459-472.

as prerequisites for entering a profession. The less emphasis is placed on specialization, the easier it is to dynamize manpower requirements over the course of educational expansion.

3. Differences from one country to the next in the political and cultural value placed on education are also reflected in requirement conceptions. Conceptions of what skills are required to accomplish a given set of occupational tasks tend to be minimalistic in some societies, where superfluous abilities are seen as a luxury. In other countries the value society places on education is in itself so much a part of requirement conceptions that a high level of education is seen as an integral part of a career role.

4. How universities are financed is a factor in this context. Restrictive conceptions of requirements are more common in societies in which the universities are to a large extent government subsidized. Debate on the pros and cons of educational expansion tends to be overshadowed by more general considerations of public finance, where worry about shortages and questions of political priorities loom large. Conversely, where private financing dominates, be it through grants, research commissions or high fees, governments have relatively little interest in controlling university capacity. In this case, there is no restrictive planning on the part of government which could inhibit requirements conceptions when they are dynamized by an increased supply of university graduates.

5. Societies which place value on social and economic planning are also more inclined to gear educational expansion to manpower requirements expectations. On the one hand, they hope (not too realistically, as actual developments have shown) that a planned economy will permit reliable predictions to be made about the need for highly qualified

manpower; on the other hand it is clear that under these circumstances there is no problem in getting all parties involved to agree to capacity planning in higher education. In the Fifties and early Sixties, university enrollment increased at a faster rate in certain eastern European countries, notably the Soviet Union and the GDR, than in most western European countries. Since then, the rate of expansion in socialist countries has slowed down considerably in line with a more rigid orientation toward plan requirements.

6. Expansion of higher education is apparently easier to effect and proceeds more smoothly in countries where the universities form a clearly defined prestige hierarchy. When in such countries enrollment increases at a faster pace than do the jobs traditionally reserved for university graduates, employers and graduates alike need do little rethinking about what training is appropriate to what position. For graduates can count in any case on achieving career positions which correspond to the relative status of their alma mater. If, on the contrary, no such prestige scale exists among universities, expansion leads to a misrelation between the purported value of a graduate's degree and the rank of the position his training "buys" him. This is frequently interpreted as an oversupply of graduates.[111]

7. As a socially integrating factor, social mobility has a dynamizing effect on conceptions of qualifications require-

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[111] Countries in which the universities enjoy relatively equal prestige appear to be strongly affected by educational expansion in all sectors; cf. Teichler, Ulrich, "Problems of West German Universities on the Way to Mass Higher Education," Western European Education, 8 (Nos. 1-2, 1976), pp. 81-120.

ments. In the United States[112] and Japan[113] for example, countries where the hope of social mobility has long been important as a means of legitimizing a particular system of government and the attendant social inequality - more so than has been the case in Western Europe - this seems to have reinforced not only educational aspirations but also requirements notions, as we shall later see.

8. A sudden increase in the number of university graduates can have the effect of strengthening the belief that there exists a fundamental oversupply. In this case the labor market may not be able to adjust to the resulting rise in qualification niveau as quickly as it comes about.

9. Since the overall need for qualifications cannot be determined in advance with certainty, periodic qualification deficits as well as the difficulties graduates in particular fields may have in finding satisfactory employment tend to function as political signals. In the mid-Sixties it was felt there was a lack of teachers and engineers in West Germany, a fact which may well have contributed to the feeling that there was need for more graduates altogether. The difficulties graduates in the field of education are currently having in the search for teaching jobs may give rise to the impression that the expansion of higher education has gone too far. By the same token, suspicion in

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112 Cf. Merelman, Richard M., "Social Stratification and Political Socialization in Mature Industrial Societies," Comparative Education Review, 19 (No. 1, 1975), 13-30.

113 Cf. Dore, Ronald P., "Mobility, Equality, and Individuation in Modern Japan," in R.P. Dore, ed., Aspects of Social Change in Modern Japan, Princeton, N.J.: Princeton University Press, 1967, 113-150.

individual countries that there exist shortages or over-supplies has tended to spread rapidly over the rest of the world.

10. In principle, the content and niveau of university training are important factors in estimating what numbers of highly qualified personnel are needed. Yet it is not possible to make a more precise assessment of the relationship between the quality and quantity of qualifications required, since at present there is little more we can do than conjecture about changes in quality over a period of time or about the comparability of various courses of study, universities and societies. To give an extreme example, restrictive conceptions of manpower requirements are of great importance in the Soviet Union, where the total period of training up to graduation is relatively short.

In pointing to these factors it is not intended to question the relevance of the qualifications requirements addressed to the system of higher education. What we do want to show is that those who attempt to determine what is needed at a particular time in a given society generally tend to underestimate other factors which are, however, essential in determining the relationship between training and work, and hence between the education system and the employment system.

4. Educational expansion and status distribution

4.1 Equality of opportunity - issues and tendencies

In the wake of World War II, efforts intensified in all industrialized countries to reduce inequalities that existed among different social groups with regard to educational opportunities. A wealth of measures were taken, ranging from the virtual elimination of student fees in most countries to the introduction of "social quotas" in university admissions,

which a number of East European countries implemented for a time in order to secure proportional enrollment of farm and industrial workers' children.

Within a matter of a very few years a remarkable change took place in many education systems throughout the world; the most striking example is the expansion of higher education, where within less than a single decade in the Fifties and Sixties the student population in almost all industrial countries doubled.[114] Crude indicators have pointed to major changes with regard to equal opportunity, as well. To give one example: According to an OECD analysis based on a 13-country sample the relative chance for upper and middle class youth to gain admission to the university was 7.5 times greater than for lower class youth in 1960; one decade later this advantage had shrunk to only 4.5 times greater.[115] We will dispense with country by country comparisons since such figures often say more about differences in the way occupational groups are defined than about actual differences in educational opportunities.[116]

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[114] See for example OECD, Development of Higher Education: 1950-1967, 2 Vols., Paris: OECD, 1970-71.

[115] OECD, Secretariat, Inequality of Educational Opportunity by Social Origin in Higher Education, Paris: OECD, 1974 (SME/CA/74.103), mimeogr.

[116] See also the discussion of methodological problems in OECD, Secretariat, Inequality of Educational Opportunity by Social Origin in Higher Education, op. cit. The difficulties involved can be demonstrated particularly well using the case of Japan. Gass, utilizing OECD categories, assumes that there is much greater inequality of opportunity on the basis of social background in Japan than in England or the United States. Gass, James R., "Reflections on Equality, Quantity and Quality in Education," in K. Hüfner and J. Naumann, eds., op. cit. If, however, another set of categories is used, this thesis appears unsatisfactory; cf. Ministry of Education, Japan, Japan's Growth and Education: Educational Development in Relation to Socio-economic Growth, Tokyo: Ministry of Education, 1963, esp. pp. 51-53; Passin, Herbert, Society and Education in Japan, New York: Teachers College Press, 1965, pp. 121 f.

On the basis of these figures, it cannot help but seem surprising that the reduction of inequities in educational opportunity should meet with skepticism at practically every turn.[117] However, a more differentiated picture shows a wealth of obstacles to any reduction of such inequality[118] and in particular to the elimination of differences in the amount of life chances people have.

Not even the most modest efforts toward equality of opportunity - removal of institutional barriers in education to guarantee each social group an equal chance - seem destinated to succeed. Admittedly, some measures may benefit all students - the extension of compulsory education, for example, along with uniform standards of education, the elimination of fees, and the introduction of school and job counselling.

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117 For an example of earlier studies which stressed the influence of education on social mobility cf. Fox, Thomas G. and S.M. Miller, "Economic, Political and Social Determinants of Mobility: An International Cross-sectional Analysis," Acta Sociologica, 9 (1966), 76-93.

118 For the discussion on equal opportunity in general cf. above all Husén, Strategies for Educational Equality, op. cit.; in addition, Bourdieu, Pierre and Jean-Claude Passeron, Die Illusion der Chancengleichheit: Untersuchungen zur Soziologie des Bildungswesens am Beispiel Frankreichs, Stuttgart: Klett, 1971; Coleman, J.S., et al., Equality of Educational Opportunity, Washington, D.C.: U.S. Department of Health, Education and Welfare, Office of Education, 1966; Floud, Jean E., A.H. Halsey, and F.M. Martin, Social Class and Educational Opportunity, Melbourne: Heinemann, 1958; Husén, Torsten, Socal Background and Educational Careers, Paris: OECD/CERI, 1972; Nunner-Winkler, Gertrud, Chancengleichheit und individuelle Förderung, Stuttgart: Enke, 1971; OECD, Secretariat, Inequalities in the Distribution of Education between Countries, Sexes, Generations and Individuals, Paris: OECD, 1974 (SME/CA/74.91), mimeogr.; Passow, A. Harry, ed., Deprivation and Disadvantage: Nature and Manifestations, Hamburg: Unesco-Institut für Pädagogik, 1970.

But the qualitative differences that continue to exist between elementary schools - even though they are formally on a par - represent a disadvantage for children in rural areas and from industrial workers' families. Those affected are sometimes hardly aware that a barrier exists - barriers such as teacher discrimination in the evaluation of a pupil's work. Other measures such as the elimination of separate school types and the introduction of a horizontal structure in secondary and higher education show where the limits are drawn on any education policy designed to promote equal opportunity. A differentiated school structure does not seem likely to prevent a hierarchy of schools and courses from developing in line with the career prospects they hold out; nor can they be expected to prevent students from being distributed among these diverse institutions and courses by social background, and thus in a discriminatory fashion.

Further limits on opportunity are set by the content and the objectives of education which, as a rule, reflect the cultural milieu of the middle and upper classes. Under these circumstances those children whose cultural values are reproduced in the schools are bound to be more successful. Yet any distinction among teaching goals and subjects along social lines would run counter to the integration and mobility concepts that are at the heart of any liberal policy designed to promote equality of opportunity.[119]

The more one has sought to achieve equal opportunities for educational success for children from all social classes through the elimination of barriers that exist within the education system, the more conscious one has become of the inequalities that exist in other, outside areas that contribute to success in education. To demonstrate this by means

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[119] Cf. Merelman, op. cit.

of a wide-spread criterium for equality of opportunity, investigations into the probability that members of a given discriminated group achieve certain educational goals such as admission to the university, relative to the average achievement of that age-group; here, the criterium used is not only equality in the sense of institutionally uninhibited opportunity for advancement for the "able", but in the final analysis equal likelihood of success, as well - in other words, not only "equality of opportunity" but also "equality of results".[120]

If one were to translate "equality of results" into political terms, this would require educational institutions to set up compensatory programs designed to offset inequalities in children's background as well as in the conditions under which they are educated.[121]

The world-wide tendency to expand pre-school education is a compromise: institutional aid is given in an effort to diminish the effects of inequal start chances. On the other hand, compensatory programs specifically tailored to individual groups are not envisioned. In addition, various forms of compensatory education have been implemented in a number of countries - usually as a supplement to normal schooling, not as an integral part of the regular program.[122]

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120 Cf. Coleman, J.S., "Equality of Opportunity and Equality of Results," Harvard Educational Review, 43 (No. 1, 1973), 129-137; Husén, Strategies for Educational Equality, op. cit.

121 Cf. for example the considerations advanced by Nunner-Winkler, op. cit.

122 For a discussion of the objectives of compensatory education cf. Oevermann, Ulrich, "Die falsche Kritik an der kompensatorischen Erziehung," Neue Sammlung, 14 (No. 6, 1974), 537-568.

The difficulties involved in using compensatory programs to achieve to the greatest possible extent "equal results" among children have heaped fuel on the fire of an even older debate, one which predates the introduction of equal opportunity policies: the debate on the relative influence of hereditary and environmental factors on the individual's "educability". Various studies have sought to establish hereditary influence statistically as some sort of "residue factor" that would account for variations in intelligence, school achievement, etc., which cannot be explained by environment differences.[123] Such studies, which have generally employed the "path analysis" method, assume that hereditary and environmental factors have a cumulative effect on learning. It seems more likely, however, that what actually obtains is an interdependence of all these factors such that no one factor can be assigned a specific, relative influence on learning ability.[124] So far as the equal opportu-

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123 See in particular Jensen, Arthur R., "How Much Can We Boost IQ and Scholastic Achievement?", Harvard Educational Review, 39 (No. 1, 1969), 1-123; Jensen, Arthur R., Educational Differences, London: Methuen, 1973; and Herrnstein, Richard J., IQ in the Meritocracy, Boston: Little, Brown, 1973. For the criticism cf. Environment, Heredity, and Intelligence, Cambridge, Mass.: Harvard Educational Review, 1969 (Reprint Series, No. 2); Science, Heritability, and IQ, Cambridge, Mass.: Harvard Educational Review, 1969 (Reprint Series, No. 4). This topic is given detailled treatment in Jencks, Christopher, et al., Inequality: A Reassessment of the Effect of Family and Schooling in America, New York: Basic Books, 1972, although from a different point of view. Cf. in this context Husén, Strategies for Educational Equality, op. cit., pp. 22-34.

124 Cf. Husén, Torsten, The Learning Society. London: Methuen, 1974; Husén, Strategies for Educational Equality, op. cit.

nity debate is concerned, hereditary determination would mean that the goal of equality of results is, in the last analysis, illusory even when compensatory efforts are made.

These difficulties in the way of any educational policy designed to bring about equal opportunity are very grave indeed and they make any idea of according proportional representation in the more prestigious educational institutions to members of all groups in society[125] seem an almost unattainable goal. As a shift in students' social background however shows, some reduction in inequality has taken place nonetheless.

In the context of our immediate concern - developmental trends in the relationship between the systems of education and employment - other limits on equality of opportunity are more important. We need to ask to what extent does improved access to higher education for hitherto discriminated groups and their increased representation among graduates result in equally improved access to occupations and high status positions.[126]

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125 Miller calls this concept "representative equality": Miller, S.M., Types of Equality: Sorting, Rewarding, Performing: A Position Paper prepared for "Education, Inequality, and National Policy - a National Policy Conference Sponsored by the George Gund Foundation, Cleveland, Ohio, and the Curriculum Research and Development Center, University of Rhode Island", Boston, 1975. Cf. in addition the discussion on "equality of access" and "equality of choice" in Fife, J.D., Applying the Goals of Student Financial Aid, Washington, D.C.: American Association for Higher Education, 1975 (ERIC/ Higher Education Research Report No. 10/1975).

126 Cf. in this context Kelsall, R.K., Anne Poole, and Annette Kuhn, Graduates: The Sociology of an Elite, London: Methuen, 1972.

One important structural means for promoting equality of opportunity has been the expansion of secondary and higher education. In an effort to neutralize threatening opposition on the part of the privileged who feared that their own chances would deteriorate, capacities throughout secondary and higher education have been expanded. It was not necessary for the privileged to worry that their prospects for admission to higher education would worsen as a result; on the contrary, there was an actual increase in the proportion of upper class sons and daughters entering universities during this phase of developments. The only real change was that university access has lost its social exclusiveness. This development has not infrequently been interpreted as an artificial reduction of inequality[127], for the conflict over status positions cannot be resolved alone by creating more opportunities to succeed in education.

Relevant empirical data support three conclusions: first, that democratized access to higher education is to some extent the inevitable statistical effect, as it were, of the expansion of higher education; even in the event that all upper class applicants were accepted for college, the "index of selectivity" - the most popular gauge - would still indicate a decrease in discrimination, provided that higher education had indeed expanded greatly and the remaining places had been filled by students from other social classes.[128]

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127 See for example Anderson, C. Arnold, "A Sceptical Note on the Relation of Vertical Mobility to Education," American Journal of Sociology, 66 (No. 6, 1961), 560-570; Strasser, Hermann, "Abbau sozialer Ungleichheit durch vermehrte Ausbildung?", IBE-Bulletin, (No. 14, 1973), 36-52, and (No. 15, 1974), 23-36.

128 Anderson, C. Arnold, "Expanding Educational Opportunities: Conceptualization and Measurement," Higher Education, 4 (No. 4, 1975), 393-408.

A second conclusion: the development of a system of mass higher education has led in all countries as a rule to a greater numerical increase in lower middle class students than in representatives from the working classes and other discriminated groups. This finding is not infrequently seen as a sign of a "polarization" of educational opportunities[129], whereby critics often overlook the fact that the rate of increase in the proportion of working class students is as a rule actually greater. A third conclusion is that educational opportunities can hardly be said to have become more equal when it comes down to access to highly rated spheres in higher education such as prestige universities or those subjects to which access is highly competitive and which are expected to pave the way to high-status positions later. A number of studies have shown that access to these highly rated educational spheres is indeed becoming more and more socially exclusive.[130]

4.2 Does the social hierarchy change as a result of educational expansion?

Experts studying the development of access to the more prestigious spheres in higher education tend either implicitly or explicitly to assume that at the moment of observation the social hierarchy of occupational positions is more or less static. They also tend to view access to the numerically few top jobs as the decisive criterium for measuring equality of opportunity.

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129 Weber, Norbert, Privilegien durch Bildung: Über die Ungleichheit der Bildungschancen in der Bundesrepublik Deutschland, Frankfurt a. M.: Suhrkamp, 1973, has misinterpreted the data he uses, however.

130 This applies to a portion of the data used by Anderson, "Expanding Educational Opportunities: Conceptualization and Measurement", op. cit. Cf. the Japanese discussion about data in Teichler, Das Dilemma der modernen Bildungsgesellschaft, op. cit., Chapter 2.

In our opinion, these implicit assumptions need to be examined more closely. It needs to be determined whether major changes have not indeed already taken place in the occupational structure and, if they have, whether or not the social hierarchy has been affected. Furthermore, it should be borne in mind that an improvement in access to higher education - even though it may fail to produce changes in the occupational structure - may nevertheless represent a success for a policy of equal opportunity in providing more people with better education, enabling them to carry out their work more competently, be more fully aware of what a job entails, and grasp and to some extent shape their occupational roles.

In evaluating the extent to which equal opportunity is (or is not) realized, it is undoubtedly of particular importance to determine whether the fact that access to higher education becomes less exclusive over the course of expansion results in a reduction of class or other social barriers to career and status opportunities. It was a maxim of equal opportunity that educational processes should be organized in such a way as to guarantee all students the same chances of succeeding in education regardless of their social background and other personal factors. Open access to education and determination of social position by educational achievement alone were held to be the mark of a just society. Debate in the Seventies about the limits of equal opportunity and the problems that arise in connection with competition over educational success has tended to ignore, or perhaps it would be better to say repress all consideration of these original maxims.

There are a number of studies whose findings are relevant in this context. They fall into three groups, each of which may be characterized by a question:

- In what way does the relationship between school-leaving certificate or university degree and occupational position change?
- Does education promote equal opportunity in the larger social context?
- Does the fact that educational expansion has helped to close the educational gap signify a general reduction in social inequality?

With regard to the first question concerning education as a determinant of occupational position there are a number of pertinent findings. Comparative studies[131] show that the further higher education expands the more likely it is that university education will be made a prerequisite for access to ranking positions. This observation is also supported by trend analyses conducted within individual societies.[132] In interpreting these findings it is emphasized that it is becoming less and less possible to acquire necessary qualifications on the job since requirements are stiffening as opportunities for 'learning by doing' are declining as a result of specialization and similar developments. At the same time, these experts state that there have recently been upgrading tendencies in some occupations as a result of the increased supply of highly qualified personnel. They contend that this can be attributed neither to any genuine change in the skills required for specific jobs nor to changed opportunities for on the job learning, nor

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131 OECD, Statistics of the Occupational and Educational Structure of the Labour Force in 53 Countries, op. cit. See also the secondary analysis by Ushiogi, op. cit.

132 For England, see Halsey, A.H., Education and Social Mobility in Britain Since World War II, Paris: OECD, 1974 (SME/CA/74.107), mimeogr.; for Japan cf. Mannari, Hiroshi, The Japanese Business Leaders, Tokyo: University of Tokyo Press, 1974.

should one assume that these changes in recruitment practices will result in improved job performance.

Moreover, it is said that a greater variety of training is possible for high-prestige occupations. The results of a study conducted by Jencks et al.[133] to establish in quantitative terms the relative importance of various factors in determining access to ranking positions has been interpreted to mean that formal education has only a relatively slight influence on status distribution and that coincidence plays a very much greater role. However, Jencks' investigation raises some methodological doubts, for education can hardly be viewed and investigated as an isolated factor. In addition, it is questionable (to say the least) to draw conclusions about the relationship between education and occupational position in an era of mass higher education from data on the educational level of an employed population which for the most part had already entered the labor force before higher education had begun to expand.[134]

In addition, there are indications that qualities other than educational achievement figure prominently in the recruit-

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[133] Jencks, et al., op. cit.

[134] For a discussion of the study by Jencks, et al., op. cit., cf. "Jencks, Christopher, Inequality: Symposium Review and Comments by the Author," American Educational Research Journal, 11 (No. 2, 1974), 149-175; Farrel, Joseph, et al., "Review Symposium: Jencks and Inequality," Comparative Education Review, 18 (No. 3, 1974), 430-450; Harris, Wendell V , "Jencks and the Carnegie Commission: Not so Different Answers to Perhaps the Wrong Question," Journal of Higher Education, 46 (No. 2, 1975), 213-225.

ment of university graduates, and that lower class graduates are disadvantaged by the application of such selection criteria.[135] Other tendencies - to be discussed later - suggest that educational expansion may well indeed foster the application of such supplementary selection criteria[136]; one indication of this is the fact that selection procedures are growing increasingly systematic both in recruitment and in traineeship programs. While university training is becoming more and more indispensible, it is also ceasing to be sufficient as a precondition to access to higher positions.

Turning to the second question - whether discrimination is lessening overall and if so, whether education is an important factor - the data basis is very weak. Few longitudinal studies have been made to date on social mobility and social stratification; those which have allow considerable latitude for interpretation; and it is very difficult if not impossible to draw conclusions about the effect mass higher education will have on a future labor market, using as material today's labor force in which the proportion of graduates is still relatively low.

In societies where the elite has tended to perpetuate itself, it appears that the proportion of lower class persons gaining access to ranking positions is growing at a modest rate. Although some studies claim that social mobility has increased with the expansion of education, discussion about this aspect is highly controversial.[137]

Turning now to the third question - whether the fact that the education gap has narrowed as a result of educational

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135 Cf. Kelsall, Poole, and Kuhn, op. cit.

136 Cf. the considerations put forward by Hartung and Nuthmann, op. cit.

137 Cf. for example, Fox and Miller, op. cit. For a discussion of this type of study cf. however Strasser, op. cit; Bowles and Gintis, "IQ in the United States Class Structure," op. cit.

expansion implies a more general reduction in social inequality - the issue of equal opportunity becomes one of equality as such. It should be noted that the politically potent demand for equal opportunity poses no immediate challenge to social inequality as such, but rather only to any determination of status on the basis of particularistic criteria. The objectives are to remove institutional obstacles standing between lower class youth and success in education, and insure that social rewards relate to actual achievement, not to other factors. Yet as we have seen, the wide-spread criteria for equal opportunity postulate not only a meritocratical social order but also that members of different groups in society have an equal probability of meeting with success in education and society. Rather than social equality, one would have to speak here of "representative" inequality. For the structure of social inequality remains essentially unaffected; all that matters is that in the succeeding generation, offspring of all classes in society are proportionally distributed throughout all social strata.[138]

If one sets out to analyse the data relevant to the question of whether or not educational expansion has an equalizing effect, it is first necessary to determine where there exists any tendency in the education system toward a lessening of educational disparities. Comparative data on the dispersion of schooling (in terms of length) within the individual age groups suggest that educational expansion is not accompanied by any general lessening of educational disparities. In some countries the gap has tended to widen; in others we have seen a reverse trend.[139]

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[138] See Miller, op. cit., pp. 5-13.

[139] OECD, Secretariat, Education, Inequality and Life Chances - The Major Policy Issues. Paris: OECD, 1974 (SME/CA/74.101), mimeogr., pp. 16-18. This study measures cohort variation in the labor force.

In all probability, this dispersion spreads when the various levels of education first begin to expand, and then contracts after a period of time.

In the United States, Canada and Japan - countries where higher education began expanding at a particularly early point - the dispersion has been obviously contracting for some time. It therefore seems justified to assume that in the formal sense, at least, the development of mass higher education goes hand in hand with a lessening of educational disparities.

In measuring the extent to which educational expansion has an equalizing effect, one procedure has been to compare the average incomes of graduates with different levels of education. The result, as we have seen, is that the relative income advantage of university graduates is often seen to appear to lessen. Nontheless, there is doubt that such data suffice to prove that education has an equalizing effect: to begin with, the rate of returns to higher education has remained relatively constant over a long period of time in a number of countries regardless of strong educational expansion. Second, the lessening of the average income advantage of additional education is remarkably small considering the rapidly growing number of university graduates in relation to job offers for highly qualified personnel and - proceeding from other considerations - assuming that there is a growing tendency toward "overqualification". Third, there is reason to suppose that although in the course of educational expansion there is a lessening in average income differences as they relate to length of education, at the same time the income differences among persons with the same length of schooling tend to widen. This may give reason to assume that income differences throughout the population as a whole remain unaffected;

in such a case, data on average income differences by length of schooling would suggest an equalization tendency that does not exist.

This consideration shows clearly that average income differences by length of education are not a suitable yardstick for determining whether educational expansion has an equalizing effect. More relevant is whether incomes become more evenly distributed throughout the labor force over the course of educational expansion. However, studies on incomes distribution in the labor force as a whole - and we have remarkably little data to draw on - show that the income gap has by no means closed in every country: whereas the gap has widened in the United States since World War II, there appears to be a reverse trend in a number of European countries.[140] This suggests that factors other than education - a country's social policy, for example - are what counts.

These latter findings also run counter to the hypothesis according to which income differences are expected to widen as a result of increasing equality of opportunity in education. When hereditary privilege has been reduced and status has finally been distributed according to achievement as equality of opportunity has become a fact, then - so goes the hypothesis - talents would have to be more functionally allocated throughout society; given pay based on achievement, this it is felt would result in a wider distribution of incomes. This hypothesis fancies that talents occur in a fixed pattern which cannot be affected by educational expansion.[141]

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[140] Cf. Miller, S.M., Social Mobility and Equality, Paris: OECD, 1974 (SME/CA/74.114), mimeogr., for a comparative analysis of available data.

[141] Cf. Miller. Social Mobility and Equality, op. cit. See also OECD, Secretariat, Education, Inequality and Life Chances - The Major Policy Issues, op. cit.

Regardless of whether or not in a given country incomes become more evenly distributed in the course of educational expansion, available data confirm that nowhere does social inequality lessen at an equal pace with the way educational disparities are overcome. In spite of the close tie that exists between schooling and occupational position, the lessening of educational disparities fails to be translated into a corresponding social equalization. On the contrary, it appears that the prevailing structure of social inequality is remaining relatively stable.

4.3 Problems of interpreting developmental trends in connection with educational expansion

Studies on developmental trends in connection with educational expansion[142] have shown - and this is their most important finding - that in all industrialized countries educational reform has led to a slight lessening of inequality of opportunity in education itself. The outcome of this process is however a far cry from the ideal of equal opportunity - all social groups equally represented at the highest level of education. On the basis of what can be determined, it is doubtful whether the hitherto steady tendency toward a growing interrelationship between schooling and occupational position[143] will persist once

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142 Cf. in addition Husén, The Learning Society, op. cit., and OECD, Secretariat, Education, Inequality and Life Chances - the Major Policy Issues, op. cit.

143 Anderson, C. Arnold, "Sociological Perspectives on the Educational Explosion," in G.Z.F. Bereday, and J.A. Lauwerys, eds., The Educational Explosion: The World Year Book of Education 1965, London: Evans, 1965, 185-199; Hartung and Nuthmann, op. cit.

mass higher education has become a reality. As we have already pointed out, although education will continue to grow in importance as a prerequisite to access to the higher occupational positions, it is becoming less and less sufficient in itself; this, when rank is assigned, will have the effect of neutralizing in some measure the equalization that will have come about in the education system; the lessening of educational disparities that takes place in the course of educational expansion fails to produce a proportional reduction in social inequality.

It therefore seems hardly possible to draw the kind of differentiated conclusions that might serve as reliable indicators of future developments. Available data are of very little help in answering what is in this context the central question. There are several reasons for this: first of all, data on the relationship between education and the social macro-structure are very difficult to obtain; available data give only a very incomplete picture. Second, there appear to be differences among the industrialized countries that should not be ignored. Third, anyone attempting to empirically determine the relative importance of such factors as the causes of inequality in educational opportunity or the relevance of education for equality of opportunity in society and for social equality is bound to run up against enormous methodological difficulties. Fourth, it is difficult to gauge the relevant effects that a developing system of mass higher education has on the relationship that exists between education and the social structure. The decisive factor in any evaluation of developmental trends in connection with educational expansion are changes in the occupational and social structure which only will become apparent in time. In view of the political relevance of this subject and the difficulties involved in obtaining scientifically ar and precise results,

it is not surprising that controversy rages around the various interpretations of what equal opportunity constitutes and how education affects the social structure. To make matters worse, a number of false conclusions - the product of too narrow specialization - have encumbered this discussion.

By limiting this consideration to the social selection function of education and the net effects of equal opportunity policies, quite a number of specialists have been giving an inadequate picture of the relationship between education, occupation and social status. It is a wide-spread practice to take "perfect" equality of opportunity or social equality and use it as a standard by which to measure the relative fluctuations in the amount of inequality that exists with regard to educational and social opportunity or in the way educational attainments and social positions are distributed throughout society. The result is that these relative changes are dismissed as not worth considering. Controversies in this area revolve less around differing interpretations of data than around differing answers to the question "how much is much?".

In addition, the feeling that status hierarchy is unalterable lies at the heart of many interpretations.[144] This assumption is not altogether unjustified, for the relative stability of the structure of social inequality is a phenomenon which is of decisive importance for

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144 For a critical assessment see Kirchberger, Stefan, Kritik der Schichtungs- und Mobilitätsforschung, Frankfurt a. M.: Campus, 1975. This applies in a typical fashion to Anderson's line of reasoning and approach to data analysis: Anderson, " A Sceptical Note on the Relation of Vertical Mobility to Education," op. cit., and Anderson, "Expanding Educational Opportunities: Conceptualization and Measurement," op. cit.

the development of education and the relationship between education and occupation or, more generally, the social structure. But in answer to such a pessimistic point of view one could ask, for example: Can such an equalization of educational opportunities be relevant to the assessment of life chances if such equalization fails to have a corresponding impact on access to the key positions in society? Are changes taking place in qualifications requirements and in occupational roles that could in the long run produce a change in the structure of social inequality? Does the gap between social and occupational groups remain unchanged when the differences in education are reduced? Will the pattern of social inequality be weakened and its legitimization challenged when differences in schooling begin to diminish substantially?

It is altogether legitimate to examine the development of education from quite different points of view. The question is, however, whether not in fact the hypothesis according to which equal opportunity policies and educational expansion have had no substantial effect on the structure of society has been confirmed for the simple reason that the only criterium used for change in social structure was change in the social origin of those people who occupy what was taken to be a fixed number of key positions in society, thereby ruling out change in the social hierarchy from the very outset?

Finally, the assumption that the social redistribution effect of educational expansion has been minimal has often been taken as a sign that education is not relevant to the social structure and, moreover, as proof that policies designed to bring about equal opportunity or social equality through educational reorganization have failed. Two political conclusions are drawn from this: first, that redistribution policies should be directed toward other social

spheres[145]; and second, that chances should be made less dependent on educational attainments, in other words, the tie between education and opportunities in society should be severed.[146]

This overlooks the fact, to begin with, that social opposition has already blocked any determined policy of equal opportunity with regard to education, so that it has become difficult to draw conclusions about the social effects that equal opportunity in education might have. Second "meritocratical" confirmation of social inequality on the basis of educational attainments are dismissed as the random offspin of political actions. Yet it seems more justified to assume that a close interrelationship between educational and occupational rank is necessary in order to secure the qualifications that are needed and at the same time guarantee loyalty to the prevailing system of social inequality. Assuming that such a close interrelationship between education and occupation is an important feature of society, then developments in the education system cannot fail to have consequences for the social structure. From this point of view, questions are in order about the repercussions the structure of social inequality has on equalization tendencies in and through education.

Just as considerations about the relationship between the employment system's qualifications requirements and the education system's output of such qualifications are inconclusive if the status-distributive function of education

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[145] Cf. for example Jencks, et al., op. cit; Halsey, op. cit.

[146] This applies in some measure to criticism of credentialism as well as to some arguments advanced in favor of recurrent education.

is disregarded, any isolated discussion of the relationship between education and social position is likely to produce erroneous conclusions.

In working out a concept by which to explain tendencies in the relationship that exists between the systems of education and employment, we have been motivated by the observation that qualifications requirements are vague, and that the social structure is resistent to equalizing tendencies arising from developments in the education system. In addition, we are convinced that individual functions of an educational system - the influence of social factors on education, for example, or the possibility of social change as a result of developments in the education system - can not be satisfactorily analyzed unless the various social functions of education are seen as interdependent. We have been particularly concerned with determining which societal requirements are decisive in shaping specific developments in education as well as policy issues, and we have sought to investigate the extent to which a given constellation of such requirements may suggest possibilities for shaping society through education.

5. The relationship between qualification and status distribution

5.1 On the growing political explosiveness of status distribution

Throughout the industrialized world there have recently developed clear signs of political opposition to the more perceptible evidence of educational expansion, in particular

the increase in university enrollment.[147] This opposition takes various forms depending on the stage of educational expansion, the importance accorded manpower requirements in the formulation of education policy, and the part played by government in planning and financing higher education. Such opposition ranges from efforts to demotivate students from continuing their education to attempts to set limits on university capacities.

Political criticism centers on the one hand on the argument that the education system's output is out of tune with the needs of the occupation system. On the other hand, there is growing concern about problems connected with selection within the education system as well as with the adjustment of education to the social hierarchy. When - against the background of debate on education policy - one considers the way the relationship between the systems of education and employment has developed, it appears as if political discussion and measures are influenced to a far greater extent by concern about selection and its legitimization than by any concern about reconciling qualifications with requirements in the actual work situation. In discussing this background of shifting accents in political debate we speak of a growing political explosiveness of the issue of status distribution. In calling a particular function of education politically explosive we do not intend to weigh the social functions of education, one against the other.

The criterium for the adequacy of our thesis - that problems of status distribution are growing in importance - is its value in helping to explain the political processes which are set in motion in reaction to a sudden expansion of

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147 Cf. the preliminary considerations to this exposition in Hartung and Nuthmann, op. cit., the formulation of the theses in Teichler, "Struktur des Hochschulwesens und 'Bedarf' an sozialer Ungleichheit," op. cit., and the subsequent discussion in Teichler, Das Dilemma der modernen Bildungsgesellschaft, op. cit.

higher education. The question is whether such political reaction seems more plausible when it is viewed as an attempt to come to terms with problems arising from discrepancies between the education and the occupation systems in terms of qualification -- or in terms of status.

It is our contention that problems concerned with reconciling the supply with the demand for qualifications have less bearing on the actual formulation of policy than one might think, judging by the political debate on the issue. To begin with, analysis of the concrete relationship that exists between education and occupation suggests, as we have seen in Chapter 2, that there is considerable scope for adjusting the education system's output to the needs of the occupation system. Technological and economic developments give us no definite clue as to which overall development in education would be most likely to serve such a process of adjustment or even stimulate the economy. At the same time - as we can see - the occupation system is able, with little friction, to absorb each new and often allegedly inadequate supply of qualifications and put it to satisfactory use. This, in turn, triggers off a reconsideration of the types of qualifications needed.

There is a second consideration underlying our thesis: that there are ideological reasons for the widespread emphasis that is placed on the qualification aspect. In efforts to justify attempts to put a brake on educational expansion in the hope of thereby reducing the problems connected with coordinating education and employment - or at least as a way of keeping these problems from magnifying - it has become popular to stress the argument of economic utility.

Since it is generally agreed that economic development should be forcefully promoted, it is an easy matter to place any reference to "overqualification" in a politically

neutral light; in contrast, it is not possible to demand openly that the existing structure of social inequality be preserved, nor can it be claimed that the same sort of consensus exists for such a demand. Furthermore, it is often maintained that further educational expansion will not benefit the economy, which gives the individual student a misleading picture of the rewards system and thus the impression that continued education will be of no benefit to him.

Growing concern about the relationship between education and socio-economic status has focussed on two very evident adjustment problems: First, it seems quite clear that the expansion of secondary and higher education, in particular the increase in higher education, has not led to corresponding equalizing tendencies with regard to job hierarchies and life chances. The resulting structural need for some sort of adjustment - be it through changes in the education system, through a change in the occupational and social structure, or be it (at the very least) through a change in the relationship between the education and the occupation systems -- has made an impact one way or the other on all persons affected by the development regardless of how its causes are explained or what the interest is in this sort of adjustment.

Second, selection within the education system has grown successively more problematical as education has expanded. Education can undoubtedly be labelled disfunctional, for it is becoming more and more difficult to orient classroom instruction and students' attitudes toward learning to the declared objectives of education; since, furthermore, selection procedures increasingly dominate educational goals, and educational reform is to a growing extent affected in a negative way - for example by efforts to compensate for the fact that certain educational institutions have become unattractive - and not positively, by programs that take account of the pedagogical and social responsibilities of education.

One can quite certainly be tempted to overrate the overall social and political relevance of such problems if one hears only what the educators and educational policy-makers have to say. For as long as there is a general feeling that qualifications requirements are more and more adequately met, the one or the other inadequacy in training has little bearing on job performance, so far as employers are concerned. In addition, as we shall discuss at a later point, intensified selection throughout the education system can have the effect of making education processes receptive to norms and expectations that rank high in society's rewards system but may be difficult to reconcile with pedagogical ideals and official goals in education. Be this as it may, the overt problems of selection within the education system have become so grave that it has become necessary to take these questions very seriously.

The fact that political opposition to educational expansion is mounting and status distribution problems resulting from the development of mass higher education are becoming politically explosive is in our opinion the result of a decisive change that has taken place in the relationship that exists between qualification and status distribution. Although ever since the beginning of industrialization problems have arisen from time to time about selection within the education system and about the labor market's capacity to absorb new graduates, the present situation seems indicative of a turn toward more fundamental change.

From the outset of industrialization up to the development of mass higher education, knowledge that is to be transmitted has been oriented to an ever increasing degree toward the requirements of the occupation system at a given point in time; at the same time, the interdependence of the qualification,

selection and allocation processes has grown ever stronger.[148] In the course of this development a meritocratical ideology has emerged according to which social inequality is seen and legitimized as the result of a system of rewards differentiated according to achievement; and social advancement is on the one hand the individual's self-realization in terms of his contribution to society, and on the other hand the means by which society stimulates and guarantees the continued provision of the qualifications it needs.

As education continues to expand, this trend cannot continue indefinitely. For as more and more students seek admission to higher education and successfully complete their courses of study, the selection processes within the education system change; discrepancies develop between graduates' qualification and the occupation system's presumed requirement for qualifications[149]; and the once valid connection between educational degree on the one hand and placement in the occupational hierarchy and allocation within the system of social inequality on the other hand is challenged.

It is our contention that as a result of these discrepancies a development is emerging in most of the industrial societies of the world whereby it is becoming politically more important

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148 Cf. Anderson, "Sociological Perspectives on the Educational Explosion," op. cit., pp. 188-192.

149 We speak of "presumed" demand in this context because on the one hand no real or actual demand is to be clearly ascertained and, on the other hand, the majority of employers plainly believes that the occupation system will require fewer university graduates than the education system is producing. Even if notions about requirements lack proper substantiation, they are important in this context because they have an impact on the political climate. What we are concerned with here is the political relevance, not the validity of notions about requirements.

to rationalize and legitimize social inequality within the education process than do justice to the concrete qualifications needs of society. When we look at actual learning processes and at the way the structure of education has been changing, we can observe a certain shift in the education system's function: status-distribution and status-legitimization are becoming more important than acquisition of qualifying skills in adjusting the education and the occupation systems. Slight distinctions in educational niveau - frequently no more than prestige nuances - have come to have roughly the same meaning in determining a graduate's life chances as used to be the case with very much larger distinctions in certification. From the political point of view, certain discrepancies between the education system's output of qualifications and concrete requirements seem to be less problematical, but they are not - as we shall later see - altogether without consequence.

In the following discussion of the political response to the above-described discrepancies between the education and the occupation systems along with the concomittant shifts in the education system's function, we have chosen to speak of a "demand" for social inequality.[150] The term "demand" is set in inverted commas in order to draw critical attention to the word's frequent association with 'necessity' and 'necessity's' apparent apolitical character; the term nonetheless has a useful function, underlining as it does the climate of social and political pressure in which the education system must play its part in selection and in stabilizing the system of social inequality.

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[150] See Teichler, "Struktur des Hochschulwesens und 'Bedarf' an sozialer Ungleichheit," op. cit.

5.2 Historical change in the relationship between qualification and status distribution

The significance of the present change in the relationship between qualification processes and status distribution becomes particularly evident when viewed in the context of historical developments and in attempts to identify characteristic forms of this relationship as they emerge in the process.[151]

In traditional society, the individual's social position was as a rule determined directly by his social origin - social status was "handed down". In a long process by which skills and knowledge were passed on from one generation to the next, qualifications were acquired through familial socialization and long periods of apprenticeship. Meanwhile, specific institutions sprung up through which the knowledge and skills needed for particular occupations were transmitted. Thus education - save in rare instances - did not determine social position, but rather was one of its attributes.

These traditional paths to qualification and the underlying social structure were severely jolted by the coming of industrialization: traditional patterns of socialization and ways of transmitting knowledge were no longer equal to the dynamics of occupational requirements, changing as they were under the impact of economic developments. Moreover, it could no longer be taken for granted that power should continue to rest in the hands of a small group for whom privilege was hereditary. Under these circumstances there developed a systematic and - as industrial development proceeded - ever closer interdependence between the organized acquisition of qualifications and status distribution. It is

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[151] This development is given detailled treatment in Teichler, Das Dilemma der modernen Bildungsgesellschaft, op. cit., Chapter 5.

characteristic of this latter stage that status distribution was as a matter of principle open and oriented toward a certain qualification niveau. The promise of social advancement served, under these circumstances, to stimulate the acquisition of required qualifications[152]; at the same time, social inequality was alleged to be the equitable reward for the performance society required, thereby guaranteeing that society would continue to function smoothly.

This development has been accompanied by a growing sense of public awareness of the fine distinctions that exist in the system of rewards, and of the connection between educational achievement and career and social status. This long-term trend is illustrated by the fact that increasingly more people are becoming conscious of the differences in social opportunity connected with the various types of education available, and consequently seek access to those educational institutions and means of becoming qualified which promise better career opportunities and higher social status.

The population's increasing awareness is a further reason for the expansion of higher education. This process of becoming aware and responding is, of course, subject to fluctuations varying with the prevailing political views, depending on whether a shortage or oversupply of qualifications is thought to exist. Yet these fluctuations are not the outcome of any "perfect" stimulation of qualifications, whereby demand would always be met:

- In the event that the education system's output of qualifications actually or supposedly falls short of the requirements of the occupation system, the above-mentioned relationship between qualification and status

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152 In contrast to Bowles and Gintis, "IQ in the United States Class Structure," op. cit., who believe that in comparison to selection aspects demand for qualifications has been of little importance for the development of education policy even during the first decades of this century, we contend that only since World War II have aspects of status distribution become politically dominant.

assignment can be put to effective political use: emphasis is then placed on the open character of the education system; at the same time, measures are taken to render access to hitherto exclusive educational institutions easier.

- On the other hand, the close connection that exists between qualification and status distribution turns out to be politically inconvenient when it is felt necessary to reduce what is thought to be an oversupply of qualifications caused by the fact that more and more people are seeking higher education. In such situations the general practice is to try to demotivate potential students by pursuading them that the connection between educational achievements and chances of acquiring status has become tenuous, and that other criteria are now more decisive in opening the way to high-status positions. Under such circumstances, no policy seriously bent on reducing a presumed qualifications surplus would have a choice other than actually reducing the social reward for additional education, thus calling in question the legitimization that educational achievement gives the system of social inequality throughout the industrialized world. This, however, would mean constantly reexamining the connection that at any one time exists between qualification and status distribution in line with prevailing assumptions about what qualifications are required.

It seems, however, that once a certain measure of interdependence has developed between qualification and status distribution, the tie cannot be loosened without there being consequences: society cannot switch back and forth from being open and achievement-oriented to the very opposite. Attempts to cut back expansion administratively the moment an oversupply of qualifications is thought to exist appear,

in fact, to sharpen public awareness all the more and indeed strengthen the demand for higher education.

A number of additional factors tend to contribute to the growing demand for access to the more attractive courses of education:

- Technological developments have produced structural change and an organization of work in industrialized countries that have resulted in a long-term trend toward ever higher qualifications; there is a tendency toward increase in "civilization's minimal requirements" as well as in the number of occupational positions which require a higher degree of qualification. The result is that more students than ever before are faced with the problem of deciding whether or not to go on into higher education.
- There is a tendency in education toward postponing selection procedures until ever later in the process. The open education system develops, as it were, its own momentum in accordance with its inner laws; the result is the automatic expansion of hitherto exclusive institutions of education.
- The occupation system is showing a tendency toward rewarding pre-career education more than ever before. This appears to apply even when the distribution of educational certificates and degrees fails to correspond to the occupational role hierarchy.

All these mechanisms, factors and tendencies have contributed to creating in many countries a far greater individual demand for status-promising education than widespread notions about qualifications requirements would make appear advisable. Studies in countries where the trend toward mass higher education is more pronounced show that this development tends to

culminate in a state of affairs in which the education system's output appears out of step with the existing social and occupational structures, in terms both of qualification and status distribution.

This appears to mark a fundamental change in the way qualification relates to status distribution. If the two are no longer interdependent, one could imagine that one of them might come to dominate: it is conceivable that if qualifications become more closely adjusted to assumed demand, educational distinctions will no longer serve to legitimize social inequality. It is equally conceivable that if status continues to be based on educational success, it would prove impossible to bring the supply of qualifications into line with demand. The fact is that the latter of these two tendencies is prevailing: status distribution is beginning to dominate. Despite a substantial reduction in educational differences, education continues to have a status-distributive function. The importance that was once accorded larger differences in educational achievement is now accorded relatively minor distinctions in niveau such as, for example, in prestige between two otherwise equal-ranking institutions.

Throughout the course of this process, people's views on the relationship between education and career is gradually changing: status expectations are coming to be attached to fine distinctions in prestige between schools, subjects and certificates more than to the level of formal education, as has long been the case. To a certain extent there are also changes going on in the way the need for qualifications is assessed and in what is considered appropriate employment for university graduates.

Throughout all this, qualification and status distribution continue to relate to one another to the extent that educational achievement is rewarded in terms of status, whereby

status distribution serves to stimulate qualification. However, with the situation changed, it is no longer a simple matter to reconcile the need to keep a balance between the provision and the requirement for qualifications, on the one hand, and the need to legitimize the prevailing system of social inequality on the other. In view of the contradictions any such effort entails, it will be interesting to see whether on the long run people feel that correlating education and occupation substantively is so frought with problems that they accept - as the "lesser evil" - either stricter selection procedures within the education process, with all their consequences for teaching and learning, or selection on a basis other than achievement in education. Or, whether in the levelling process remaining educational distinctions will cease to suffice to justify the existence of unequal chances in life.

5.3 Discussion of alternative courses of development and possibilities for adjustment

In contrast to our thesis that a "dominance of status distribution" is developing, there appear to be a number of other conceivable possibilities for reconciling the discrepancies we have been describing.

a) A reduction in the discrepancies that exist with regard to length of schooling and a lessening of differences in niveau between various courses of study could have an equalizing effect on the social structure.

b) A gradual reduction in discrepancies in educational attainment in the presence of a relatively stable structure of social inequality could result in the education system gradually losing its importance for the process of social selection, which then would gradually be relocated in the occupation system.

c) Differences in social reward could become so slight in response to educational expansion that educational aspirations would generally lower, thereby bringing about a measure of agreement between assumed qualifications requirements and the output of the education system.

d) Finally, it is conceivable that planning and administrative measures could affect the way education is organized, to the extent that it meets the qualification requirements of the employment system.

Of these four possibilities, the one that deviates most sharply from our thesis is the assumption that educational expansion has an equalizing effect on society. For many people, hope that educational expansion would promote not only equality of opportunity but also a reduction in social hierarchies was one of the main considerations motivating them to work toward educational reform. Available data give grounds for skepticism, however.

Although - as we have already stated - a number of studies give evidence that college graduates are losing their income advantage, other investigations show that income differences tend to widen over the course of a career; that depending on type and length of schooling, differences increase when hidden forms of gratification are taken into consideration; that tendencies toward a lessening of income differences often turn out to be short-lived; and income differences do not lessen at all in some societies.

Nonetheless, this evidence does not suffice to rule out all possibilitiy of equalization through education. On balance one would have to say that in view of current developments in the relationship between the education system and the occupation system, there are sufficient grounds for maintaining that the existing structure of social inequality is relatively stable.

So far as the second assumption is concerned - that selection is shifting out of the education system into the occupation system - three schools of thought emerge from the discussion. To begin with, analysis of selection patterns suggests that under certain circumstances - a reduction in differences in educational niveau without, however, substantial change in the social structure - the tendency for the relationship between the education and the occupation system to stabilize is in danger of being reversed. If this is the case, the shift of selection from the education into the occupation system is to be seen as the most likely development.[153] Second, there is discussion in this context about what is meant by "meritocracy", which it is felt forms or ought to form the basis of selection and its legitimization. The question here is: to what extent is social reward based on qualifications that are earned before a person enters the labor force, and to what extent is this reward dependent on actual achievement throughout a person's working life. Third, political demand for locating selection to a greater extent in the occupation system is often raised in order to discourage people from seeking more education as a means of gearing the quantitative development of education more closely to the assumed qualification requirements of society.

Selection patterns differ from one industrial society to the next. In the United States, for example, meritocracy is thought to refer to the system of rewarding current job performance and it is generally agreed there that this is the way things ought to be. The United States Supreme Court's decision of 1971, which saw a danger to equal job opportunity in the practice of recruitment on the basis of educational certificate, together with the Equal Opportunities

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[153] Cf. in particular Hartung and Nuthmann, op. cit.

Employment Act of 1972 both give implicit support to the concept of life-long competition.[154] In contrast, quite different factors enter into the understanding of what meritocracy means in Japan. There, the principles of permanent employment and seniority are held in great respect, socio-economic status is determined for a lifetime by the level of qualifications and social skills a person has attained in his pre-career education. As a result of these norms, intra-generational mobility be low, intergenerational mobility on the other hand high.

Proceeding from the normative basis of what we have described as the "American model", any deviation from this model in the direction of relatively continual reward for a once-acquired qualification niveau can be termed "credentialism", the Japanese model "degreeocracy".[155] Such a negative evaluation appears not only politically questionable, as we shall substantiate in Chapter 7; it is also analytically problematical in the sense that differences with regard to these countries' respective gratification systems and their selection patterns tend to be exaggerated in the process. Discussion of the advantages and disadvantages of Japanese selection and employment practices shows that industrial societies have more in

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154 Cf. the detailled discussion in Huff, op. cit.

155 Galtung has adopted this term, calling the expression "meritocracy" adequate only in the case of the type of life-long rewards that in his view are typical of "liberal society"; cf. Galtung, Johan, "Social Structure, Education Structure and Life Long Education: The Case of Japan," in Reviews of National Policy for Education. Japan, Paris: OECD, 1971, pp. 131-152. For a critical assessment see Dore, Ronald P., "The Future of Japan's Meritocracy," in Bulletin. International House of Japan, (No. 26, 1970), pp. 30-50; and Teichler, Das Dilemma der modernen Bildungsgesellschaft, op. cit.

common than is generally assumed.[156] There are, of course, notable differences in the traditions that have a bearing on the organization of work in the various countries: in Japan, for example, the relatively slight emphasis placed on individual competition during a working life corresponds to pecularities in the way achievement is motivated in that country.[157] As we shall see, however, life-long competition in other societies does not necessarily promote ever improving job performance, as its advocates presume, and limits on in-career selection can be seen to be altogether "functional".

- So far as qualification is concerned, one of the main factors in job performance, a secular tendency toward pre-career qualification has been evident for some time[158]; if under present social conditions selection is closely tied to the process of qualification, this will lead to a growing emphasis on pre-career selection.
- Motivation, the second major constituent of job performance, is not what one could say stimulated by constant doubt about job security. There are surely other ways of creating it. In Japan, for example, it has been shown that where there are good prospects for a secure future, achievement is stimulated by a differentiated system of rewards.[159]

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156 In addition to the sources cited above, cf. OECD, Manpower Policy in Japan, Paris: OECD, 1973 (Reviews of Manpower and Social Policies, Vol. 11); Aonuma, Yoshimatsu, "Kogakurekika to junji kanri," in Shushoku shido, 3 (No. 11, 1971), pp. 26-29; Cole, R. E., "Permanent Employment in Japan: Facts and Fantasies," in Industrial and Labor Relations Review, 26 (1972), pp. 615-630; Takane, Masaaki, "Das Konkurrenz-Prinzip und die 'Akademiker-Gesellschaft'", in Kagami. Japanischer Zeitschriftenspiegel, 2, (No. 2, 1975), pp. 49-67; Wada, Shuji, "Japan's Academic Career-cult," in J.A. Lauwerys and D.G. Scanlon, eds., Examinations: The World Year Book of Education, London: Evans, 1969, pp. 291-297: For a summary see the discussion in Teichler and Teichler-Urata, op. cit., pp. 211-215.

157 Cf. De Vos, George A., Socialization of Achievement: Essays on the Cultural Psychology of the Japanese, Berkeley; University of California Press, 1973.

158 Cf. Dore, "The Future of Japan's Meritocracy," op. cit.

159 Cf. Cole, op. cit; Teichler and Teichler-Urata, op. cit.

In many other countries, people are becoming increasingly aware of the effect growing social insecurity has on job performance[160]; the more a certain measure of loyalty is required above and beyond actual expenditure of effort if a person's job performance is to be considered satisfactory, the less an employer can hope to enforce his will with crude threats. This applies in particular to the type of jobs traditionally reserved for university graduates, which are often characterized by a relatively undefined set of activities. Moreover, close cooperation - in growing demand as a result of today's increasingly complex organisation of work - can only be secured when there is a limit to the amount of competition that exists within a given group of employees. This gives added grounds for reservations about the principle of life-long competition.

- Finally, employers are in no position to give in-career selection the legitimization it requires. Although it is common practice to stimulate job performance with promises of advancement or make employees compliant with threats of demotion, employers are hesitant about shouldering the full burden of selection and its legitimization. This once again applies above all to those occupations for which more complex qualifications are required, it being particularly difficult to evaluate job performance in such cases.

Thus, so far as problems of occupational qualification are concerned, unrestricted competition is by no means the keystone of modern industrial society. It remains to be seen whether on the basis of such considerations there develops a tendency

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160 See in particular Seibel, Hans D., The Dynamics of Achievement: A Radical Perspective, Indianapolis: Bobbs-Merrill, 1974; in addition, Aonuma, op. cit., and Cole, op. cit. Cole writes, "The core of the permanent employment system is present in any on-going industrial society." (p. 627)

throughout the world to adopt the Japanese model[161] or whether "convergence" is to be expected.[162] In any event, available evidence makes it appear improbable that a shift of the selection process into the occupation system would be either a satisfactory or a likely solution. In addition, it appears as though bargaining between employers and employees everywhere is tending to revolve more and more around job security, risk diminishment and the maintainance of once-attained position

Turning to selection from career entry onward, it is not altogether clear whether educational expansion has the effect of reducing the influence educational success has on occupational position. There has undoubtedly been an increase in the use of differentiated, formalized procedures in the recruitment of university graduates along with more frequent use of traineeships and in-service training and a growing differentiation of career patterns.[163] The unquestionable proliferation of selection procedures makes it now difficult to determine whether a person's particular certification has a strong or a negligible influence on his changes of success in a subsequent process of selection. Although we cannot rule out an increase in the importance of in-career selection, we can be sure that what will count more and more in such selection are fine distinctions in education such as the difference in prestige between formally equivalent institutions - the reason being that the lessening in distinctions due to length of schooling and niveau would otherwise make it difficult to prevent the prevailing structure of social inequality from disintegrating.

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161 Cf. Teichler, Das Dilemma der modernen Bildungsgesellschaft, op. cit.

162 Cf. the explicit theses laid down by the international expert commission in OECD, Manpower Policy in Japan, op. cit., as well as the considerations put forward by Cole, op. cit.

163 Cf. the pertinent discussion and references in Hartung and Nuthmann, op. cit.

According to the third of the assumptions we have been discussing, a lessening of differences in social reward can have the effect of reducing educational aspirations and in this way prevent discrepancies from developing between the presumed requirement for qualifications and the education system's output of such qualifications. Assumptions of this sort are generally based on the kind of functionalistic notions of harmony that underlie some education economists' theses about the close tie that exists between personal income and the returns to society on educational expenditures, and also informs the thesis, popular among sociologists, according to which personal and social interests converge under the prevailing system of social inequality.[164] The tendency in some countries for the number of applicants and students to fluctuate is often put forward as empirical evidence for this thesis.

Opposing this assumption, it can be demonstrated, first, that the prevailing system of social inequality cannot help but be characterized by conflict or difficulties connected with adjusting supply and demand for qualifications.[165] When great numbers of people are able to grasp what the prevailing system of rewards is all about; when access to education is open to some extent; when, furthermore, education is recognized as an important factor in determining status; then the result, quite naturally, is that people will strive hard to attain as much education as possible. If the capacity of higher education is not limited by administrative measures,

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164 Explicit attention to this socio-philosophical basis is more often drawn in sociological studies than in the work of educational economists. Cf. in particular the classical explanation in Davis, Kingsley, and Moore, Wilbert E., "Some Principles of Stratification," in C.S. Heller, ed., Structured Social Inequality, New York: Collier-Macmillan, 1969, pp. 496-503.

165 Cf. the analyses by Neelsen, John P., "Education and Social Mobility," in Comparative Education Review, 19 (No. 1, 1975), pp. 129-143, in particular, as well as Lutz, Schultz-Wild, and Sengenberger, op. cit.

expansion can be expected to set in as a rule, triggering off new conflict over the coordination of education and employment.

Second, rewards cannot be continually altered to fit whichever notions about required qualifications happen to be current. As explained elsewhere, existing possibilities for vertical substitution make a system of reward according to educational niveau seem the obvious solution. It can hardly be expected that a relative decrease in privilege would have any regulatory effect on the market since people are in no position to change their basic qualifications repeatedly throughout a lifetime to adapt to short-lived changes in the system of rewards. Thus, they tend to prefer obtaining the highest level of education possible. Significantly enough, employers have never attempted to bring about changes in the pattern of rewards so momentous as to cast doubt upon the positive correlation between educational rank and occupational position.

A change of this sort would also seem to pose problems for the prevailing meritocracy, for it would challenge the prevailing notion that privilege is justified by educational success, endangering the reward system's transparency and predictability. This would mean that it would no longer be possible to achieve success by means of a calculated plan, for such consistency is not possible without long-range goals in view. For all practical purposes, pre-career training would thereby drop out of the picture as part of a meritocratical legitimization for social inequality.

A third argument against this assumption is that fluctuations in the size of the student population have not yet amounted to convincing proof of the thesis that one can control the supply of qualifications by changing the pattern of occupational rewards. Although there has been a notable decline in the number of students in Sweden in the past few years

as well as in the United States between 1969 and 1973, the American example shows that one should not take such developments too seriously: the short-lived decline in that country is to some extent connected with the fact that for those who wanted to avoid military service, college was no longer the only way out.[166] Another factor - before affirmative action policies began to have an impact - was disillusionment when it was discovered that after having been granted preferred admission to some universities despite a poor high school record or entrance exams, representatives of minority groups were not as a rule offered the expected positions upon graduates. Their qualification level on graduation from college is often lower than that of many high school graduates, with the result that employers have tended not to take their college degrees at full value. Altogether, this has led to a certain feeling of uncertainty about the value of college degrees and produced at least a temporary decline in college attendance. This, it should be noted, is the effect of compensatory policies specific to American higher education. The assumption in most other countries is that college graduates in general - even those from less prestigious institutions - are more highly qualified than first-time job holders with no more than secondary school education. Finally it should be noted that the decline in American college applicants was relatively small, considering how strong the decline in job offers was at the time.[167]

As we have seen, one can expect college applicants to decline somewhat as rewards for higher education in terms of renume-

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[166] Cf. in addition Trow, Martin, "Notes on American Higher Education: Planning for Universal Access in the Context of Uncertainty," in Higher Education, 4 (No. 1, 1975), pp. 1-11.

[167] On the latter cf. Freeman and Hollomon, op. cit.

ration and status diminish. Yet, leaving aside Sweden where the development has not been underway long enough to assess, there is no evidence that limited modifications in the system of rewards will lead to a decline in the student population that would correspond to manpower requirements notions at any given time. It appears that with few exceptions in the industrialized world educational rank correlates with social status less on the basis of the model we have been discussing here by means of a more differentiated system of rewards by educational rank and the additional stratification of the system of higher education.

The fourth assumption - according to which university admissions should be geared to assumed qualifications requirements - once again became a focus of discussion during the Seventies. Social selection through education is perpetuated or even strengthened, as are traditional notions about qualifications requirements and coordinated supply.

University planning proceeds from this type of model in a number of East European countries.[168] In countries such as the United States and Japan, on the other hand, this type of planning is out of the question, decisions about financing and capacities being largely in the hand of market-oriented, independent agencies. In those countries where the government has strong influence on university capacity, planning decisions generally strike a compromise between the assumed need for qualifications and demand for admission to higher education. This seems sensible, for any other course would only further exacerbate the problems attendant on selection within the education system. Furthermore, it is general knowledge that ideas about qualifications requirements are vague,

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168 Glowka, Detlef, "Jährlich fünf Milliarden Rubel Verlust: Über das sowjetische Bildungssystem," in Wirtschaftswoche, 29 (21, 1975), pp. 48-53.

to say the least. In view of the risks involved in a demand-oriented policy it is understandable that some planners would rather make the best of overqualification than face the danger of underqualification[169], and attach importance to factors other than the coordination of qualification supply and demand , as well.

In conclusion, all four of these assumptions about the long-term coordination of educational output and qualifications requirements can claim some sort of evidence in their support. In most industrialized countries, things have not developed in line with any one of these ideal-typical conceptions; instead, all four possible forms of coordination co-exist, but vary in their impact. As we shall show in Chapter 6, efforts to solve the problems of coordination caused by a tendency for educational differences to equalize where the structure of social inequality remains relatively stable tend to focus primarily on giving greater weight to the finer distinctions in educational achievement, niveau, and the like. The alternative we have discussed in this chapter, translated into concrete measures, would be of more or less supplementary value, depending on the society.

5.4 Some notes on our approach

Before we turn to more recent trends and developments in the relationship between the education system and the occupation system, a few remarks are in order about our central theses and some of the problems connected with the approach.

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169 Mertens, Dieter, Unterqualifikation oder Überqualifikation? Anmerkungen zum Bedarf an unqualifizierten Arbeitskräften, München: Arbeitskreis Regionale Bildungsplanung, 1976, mimeogr.

It is true that the selection function of education has become more and more important for both political and practical reasons. This has not, however, made status distribution completely independent of qualification and vice versa. Their interdependence exists by virtue of the fact, to begin with, that every educational or administrative measure designed to coordinate educational rank and status has an impact on the education system's output of qualifications. Translated into "rational" policy designed, for example, to deal specifically with selection problems under current conditions, this would mean testing the measures under consideration for their compatibility with qualification needs and basing any decisions to be made on the results of such tests. Beyond this, any reduction in the differences that exist among qualifications has considerable importance for the distribution of life chances and plays a part in legitimizing social inequality.

A second point that should be made is that the assumption that there exists a relatively stable structure of social inequality does not mean that we consider any one particular distribution of life chances as permanent and unalterable. We have reservations about the widespread view among experts on mobility and social stratification that inequality is a more or less invariable factor; as we shall subsequently see, educational expansion may well have already created certain circumstances which may have considerable bearing on the distribution of life chances.

On the basis of class and stratification theories as they presently stand[170], it is our view that it is not possible

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170 Cf. among others Bendix, Reinhard and Seymour M. Lipset, eds., Class, Status, and Power: Social Stratification in Comparative Perspective, 2nd Edition, London: Routledge and Kegan Paul, 1967; Goldthorpe, John H., "Social Stratification in Industrial Society," in C.S. Heller, ed., op. cit., pp. 452-465; Autorenkollektiv des Instituts für Marxistische Studien und Forschungen (IMSF), Klassen- und Sozialstruktur der BRD 1950-1970, Vol. 1: Klassen-

to determine the point where the system of social inequality loses its relative stability. In the framework of our thesis, however, it should suffice to note that whereas the occupation system responds more or less flexibly to fluctuations in the supply of qualifications, it is less affected by changes in the hierarchy of certificates and degrees or by demands for change in the social structure arising from such changes in the educational status hierarchy. Instead, the pressure reverts back onto the education system - another factor contributing to the maintenance of the structure of social inequality.

The third point is that selection and the legitimization of inequality are characterized as a rule by social mechanisms which comprise what one could term, paraphrasing Bell[171], a "moderate educational meritocracy". What this means is that there is always a certain measure of openness in regard to access to education, universality in regard to selection criteria, transparency and fairness in selection procedures, and a degree to which success in education can determine social status -- just enough to guarantee that people continue to strive for qualifications and to play the competition game according to the rules. Those experts who feel that there is "slight" equality of opportunity, little connection between educational achievements and the concrete form these acquired qualifications take in the actual work situation, that there is negligible social mobility and that curricula and teachers' attitudes are anything but free of class bias -- such experts are apply-

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und Sozialstruktur der BRD 1950-1970: Sozialstatistische Analyse, Frankfurt a.M., 1974; Vol. 2: Klassen- und Sozialstruktur der BRD 1950-1970: Sozialstatistische Analyse, Frankfurt a.M., 1974; Vol. 3: Die Intelligenz der BRD 1950-1970, Frankfurt a.M., 1975.

171 Bell, Daniel, The Coming of Post-Industrial Society, New York: Basic Books, 1973.

ing the standards of an open or egalitarian society. Yet the people with whom we are concerned are quite clearly motivated by very much less openness.

In none of the industrialized countries does social status appear to be determined exclusively or near to exclusively by education. On the other hand, nowhere is education irrelevant to socio-economic status. Neither does one find equal opportunity fully realized, nor is social discrimination so complete that there would seem to be no point for members of disadvantaged groups to even bother about becoming qualified through education. Selection through education is neither completely open, fair and universal, nor does success in education appear to be a simple matter of luck. So far as the distribution of life chances is concerned, society is neither so open that those in power cannot maintain a relatively privileged position with no recourse for the rest of society but to believe that less success is the result of individual failure; nor does society have such a closed structure that it would seem useless for the individual to even consider endeavoring by his own efforts to better his position in accordance with society's system of rewards.

It should be stressed as a fourth point that in describing and explaining the social causes of various directions in policy-making that affect the relationship between the education and the occupation systems, we do not intend to suggest that political counter-strategies need necessarily be doomed to failure from the very outset. We do contend that the prevailing system of social inequality along with selection and its legitimization through the existence of a "moderate educational meritocracy" are so deeply rooted in the whole system of industrial society that efforts to counteract these phenomena have little chance of affecting political decisions in any substantial way.

5.5 Problems of the approach and tasks for further research

We have set out in these pages to explain current developments in the relationship between the education and the occupation systems by applying new criteria to the evaluation of the relative part that is played by the various demands placed on education - that it provide qualifications on the one hand and, on the other, function as a selection mechanism and, indirectly, as legitimization for social inequality. This leaves a number of important questions open. The focus of problems connected with the relationship between training and occupation has been shifting, and at the same time political efforts to reduce the friction caused by educational expansion have met with considerable difficulties. It is our conviction that a more complex definition of the way the education system and education processes function is needed in order to explain adequately the problems that are affecting the relationship between education and occupation and pave the way to a more rational political response to these problems. For this reason we have decided to offer our own approach for discussion even though - as should be evident - it is still only in a preliminary stage of formulation.

Anyone hoping to reduce the shortcomings of the debate as it has been conducted up to now will have to pay attention to the following four major areas of investigation:

The first such areas involves analysis of the complex structure of demands society places on education, the result of economic and social developments. Analysis of studies concerned with qualification or social selection through education has made it plain that an approach is needed which is comprehensive enough to encompass the various functions of education on an interdisciplinary basis. Setting aside for a moment problems connected with the decision-making process and the education system's relative autonomy, what

is needed now is a more differentiated analysis of the demands and expectations of society vis-à-vis its education system. To help overcome previous conceptual limitations, it is necessary to examine the extent to which technostructural impulses and demands are related to prevailing social conditions and the power structure. In addition, it has not yet been sufficiently explained to what extent changes in the distribution of work as well as in the gradated pattern of qualifications have a substantial effect on the social hierarchy. Furthermore, it would seem important to analyze developments in the occupation system that appear to be a reaction to some educational output that runs counter to what the occupation system is presumed to require - an "over-qualification", for example. In terms of research strategy, this approach can be useful as a means by which to determine what impact, relatively speaking, qualification and status distribution have on current developments. It can also help one to establish to what extent the education system is determined by forces outside its own realm of control or can be seen as relatively autonomous.

A second area for further research concerns the problem of transforming the demands society places on education into concrete political action and planning. The question is: to what extent is political decision-making to be considered an "intervening variable"? Research attention should be focussed in this context on the difficulties the authorities have in recognizing societal demands. Another focal point is the way planning strategies are affected by uncertainties about the way society is developing and the tendency for government agencies to become self-perpetuating; further, the extent to which the type of social and political system and political goals have a bearing on the authorities' ability to perceive societal demands and develop strategies in response; and finally, how decisions in the relationship between education and occupation are affected by allegiances,

and what problems arise when it comes to implementing such decisions.

A third area for additional research concerns the way the demands society places on education are transformed into educational structures, processes and curricula.

To begin with, research on "qualification" is currently plagued by uncertainty about the interrelationship between personality traits, learning processes and abilities on the one hand, and a person's capacity to satisfy a particular occupational requirement on the other. Second, it has not yet been fully clarified just how occupational requirements are related to a body of knowledge and cultural traditions. Third, too little is known about what the quantitative coordination of supply and demand, the occupational allocation of graduates and changes in the actual content of a job imply for curricula, particularly in the area of higher education.

The fourth area of study concerns the relationship between structures that actually exist and individual behavior. Sociological theory, at its present stage of development, allows us to accept the structure of social inequality and a differentiated reward system as given and proceed to develop corresponding models of behavior. The assumption that there exists a hierarchy of life chances and that people are inclined to strive for the highest social reward attainable does not depend, in the last analysis, on empirical proof as to the extent to which expectations about income and occupational prestige determine attitudes toward education; nor is it decisive to which extent a consensus exists about what things and goals are of supreme importance in life, and what part is played by resignation or by satisfaction with one's position in life, or by collective efforts for social change compared to individual efforts to succeed. To

illustrate this point, "hippy culture" was founded on a highly individualistic approach to values and judgements which, by its very negation of prevailing norms, only serves to confirm the objective relevance of the prevailing system of social rewards. On the other hand, it would seem worthwhile to analyze individual aptitudes and behavior with a view to establishing, for instance, whether a shift in priorities is taking place with regard to people's goals in life; for the less the reward system has an impact on individual behavior, the more readily it changes. Studies on individual behavior may prove helpful in determining whether life chances become less dependent on occupational status when educational disparities are reduced, the range of leisure activities is widened and the political climate changes. In this sense the development of theoretical conceptions about the relationship between opportunities in society and personal goals in life is very important indeed for any analysis of the way the education system and the occupation system develop in relation to one another.

6. Recent trends and developments in the education system

6.1 Objectives of the analysis

In the following pages we shall investigate how the previously discussed problems of coordinating the education and the occupation systems affect the education system. In this connection we shall trace the development of selection patterns in the education system as a whole, institutional hierarchies in higher education, and access to higher education in particular, for in our opinion it is here that the growing importance of status distributive factors for change in education can be most clearly demonstrated. We shall describe general tendencies in the way policy measures and individual attitudes toward education influence one another -

tendencies that appear to prevail in all industrialized countries. Developments in certain individual countries will be described in greater detail by way of illustration.

6.2 Changes in the pattern of selection within education

At first glance it would seem as if selection patterns within the education process[172] differ quite markedly from one industrialized society to the next. This is the impression one gains when one compares the relative importance of the various phases of selection:

- at transition to secondary education,
- during secondary school[173],
- at entry to higher education,
- throughout the course of higher education.

The importance of these phases depends, in addition, on whether and to what extent further selection takes place during recruitment and throughout the course of working life which might serve as a corrective to pre-career selection.

Second, comparison reveals fairly large differences when one examines selection processes that take place on a particular level of education. These differences can be measured, in particular, by

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172 Cf. the scheme employed by Cerych, which has been used here in somewhat more differentiated form; Cerych, Ladislav, Access and Structure of Post-secondary Education, Paris: Institute of Education, European Cultural Foundation, 1975.

173 In order to simplify the model we have chosen not to distinguish between selection on the first and on the second level of secondary education.

- the failure and drop-out rate,
- the amount of switching that takes place from one course of study or institution to the other,
- the extent to which grades or diplomas have an effect on chances for further study.

A third point at which selection processes are found to differ considerably is the transition from one level of education to the next. In determining such differences, attention should focus on the following points:

- the extent to which curricula in all institutions on the preceding level are comparable and these institutions are homogeneous or heterogeneous in terms of rank;
- the ease of transfer from one type of school or course to the other on the pre-transition level;
- the extent to which the pre-transition examination or diploma entitles the student to a certain type of further education;
- the institutional structure of the next higher level (whether it is horizontal or vertical, the extent to which informal prestige differences are a factor, etc.);
- the extent to which formal admissions procedures apply (proportion of places for study or training at the next higher level to which admission is open or, instead, is governed by selective admissions procedures);
- the degree to which formal admissions procedures are standardized (whether there is a uniform national system, universities have their own special admissions requirements, etc.);
- the extent to which subject matter is coordinated and didactical continuity is maintained from one level to the next;
- the relative weight accorded previous grades, entrance examinations and other criteria in admissions.[174]

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[174] Cf. Cerych, op. cit.

The various selection patterns also vary from country to country in the impact they have on preceding education, just as they have an influence on students' personal wishes and the decisions they make in this respect. Two examples may serve to illustrate existing differences:

- to the extent that it governs access to the more prestigious institutions of higher learning, the numerus clausus is coming under increasing fire in many parts of continental Europe. On the other hand, public discussion seldom touches on restrictions in admission to lower-ranking institutions, and these are generally accepted. In contrast, admissions restrictions in the Anglo-Saxon countries are reserved for those prestigious institutions which stand at the top of a carefully differentiated hierarchy of colleges and universities; whereas this is considered normal, considerable effort is made to help students gain access to the less attractive institutions.

- The OECD commission that visited Japan in 1970 to evaluate that country's education policy came to the conclusion that Japan's system of university admissions was having a very serious effect on the school, the university and the personality of those involved, an effect which could only be ameliorated if university access is de-emphasized throughout the various social and educational processes of selection. Their preliminary report proposes - among other things - that university access be made easier and, instead of entrance restrictions, more students should be "sorted out" in the first two years of study. It is felt that one can justify breaking off studies at this point because the general education program that makes up the first two years of study at Japanese universities is considered to be of value regardless of what one does later on. Although the Japanese participants in the discussion have admitted that to concentrate selection on university admission has intolerable consequences, this concrete

proposal aroused their indignation and in the end was deleted from the OECD commission's final report.[175] The conclusion can be drawn that a worsening of selection problems within a system of education is not necessarily enough to change a society's prevailing notions about the forms mobility should take and the conditions under which mobility may occur - whether, in other words, higher education should be characterized by "sponsored mobility" or by "contest mobility".[176]

Despite all the notable differences, there are certain common trends in the way selection patterns have been changing. The decisive phase of selection is concentrating to a growing extent on the "borders" of higher education, on admissions and - to a lesser degree - on the concluding phase. This is the outcome of a dynamic policy of expansion that was implemented in the area of secondary education in the wake of the Second World War. Although in the various countries affected by this trend there existed quite diverse notions about the social function of education and in particular about what skills were needed and what role education should play in the selection process, the structural reforms actually implemented proved to be quite similar in a number of these countries[177], with the effect

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175 For the discrepancy, compare OECD, Education Committe, Reviews of National Policies for Education - Japan. Paris: OECD, 1970, mimeogr.; and OECD, Reviews of National Policies for Education - Japan, Paris: OECD, 1971.

176 For the concept see Turner, Ralph H., "Modes of Social Ascent through Education," in R. Bendix and S.M. Lipset, eds., Class, Status, and Power, op. cit.; for its relevance to the Japanese situation cf. Takane, op. cit.

177 Cf. the comparative studies by Bowles, F., Access to Higher Education: Report of the International Study of University Admissions, Vol. 1, Paris: Unesco and the International Association of Universities, 1963; OECD, Statistics of the Occupational and Educational Structure of the Labour Force in 53 Countries, Paris: OECD, 1969; Robinsohn, Saul B., et al., Schulreform im gesellschaftlichen Prozeß, 2 Vols., Stuttgart, 1970 and 1975; and Braun, Frank, et al., Schulreform und Gesellschaft: Vergleichende Studien über die gesellschaftlichen Bedingungen von Schulreformen in sieben europäischen Ländern, 2 Vols., Berlin: Max-Planck-Institut für Bildungsforschung, 1975 (Materialien aus der Bildungsforschung, No. 3).

of postponing selection to a later point in the educational process. Some if not all the following changes came about in all the industrialized countries:

- extension of undifferented, basic education;
- abolition of entrance examinations to secondary school, or implementation of other measures designed to facilitate transition;
- expansion of those branches of secondary education in particular that traditionally pave the way to higher education or provide the best preparation;
- introduction of measures facilitating transfer from one type of secondary school or program to another;
- institutional measures designed to enable a person to supplement his education with evening and summer courses, correspondence courses and other forms of in-service training;
- a horizontalization in the structure of secondary education, theoretically giving graduates of different types of institutions or in different programs an equal right to seek admission to higher education;
- differentiation in secondary education in the sense of partial institutional and curricular integration with certificates of various types awarded on conclusion of integrated schooling.

Rationalization and a more economic administration of education - evident in the growing interest in planning and educational economy - have also contributed to changes in selection patterns. From the standpoint of formal effectivity, dropping out is coming to be considered "wastage" and it is being felt necessary to counteract it; other measures have been designed to do away with the "unsystematical" profusion of certificates by integrating various institutions, for example, or by declaring different types of education formally equivalent.

In addition there has been a growing tendency within both elementary and secondary education to postpone selection

to an ever later stage of education. To begin with, efforts to help disadvantaged youth succeed in education have had the effect of keeping failing students in the more prestigious courses and types of school longer than might otherwise have been the case. Second, educators have been voicing increasing criticism about the contradictory nature of an education that is designed to "enrich" while at the same time functioning as selection. Third, students' performance has improved to some extent, automatically increasing the number of university applications, since school grades are not in every instance adjusted to an overall average. As a result, more students are being admitted to upper secondary education; furthermore, under these circumstances there has been a tendency in many countries for the drop-out rate and rate of repeats to fall.

It can also be observed that in attempting to provide all children with a chance to succeed in school while simultaneously insuring that selection is fair, selection is necessarily postponed until later and later in the education process. Children from disadvantaged groups in society have a better chance when selection occurs at a later stage; resulting conflict with traditionally privileged groups tends to subside when the more attractive institutions are expanded in capacity. The long-range effects of errors in selection can be minimized by ensuring that the education system is organizationally "permeable", thus enabling a person to pick up where he left off, later on. Finally, once developments have led to a lessening of differences in performance and the education system has been made objective, it is only a logical conclusion that the institutional hierarchy will become less pronounced. For the less broad the dispersion of test results is in a given grade, the less likely it is that there will be a high correlation between these results and later success in education.

This tendency toward postponed selection has not been confined to those countries where great effort has been made to bring about equal opportunity, nor is it limited to those periods in which people have been generally inclined to assume that there is a need for strong educational expansion; indeed, it appears to exist or continue, as the case may be, even when strong educational expansion meets with political opposition. Social conflict is what results when on the one hand efforts are made to block the trend toward a reduction in the differences in educational niveau that have traditionally justified specific claims to social status and when, on the other hand, pressure is brought to bear on the authorities to take account of a growing desire for further education and make provision for the resulting educational achievement by providing adequate employment. Such conflict leads to compromises on higher education which can be seen as an alternating pattern of "depreciation" and "upgrading".[178]

Students, increasingly aware of the relationship that exists between different types of degree and career prospects, opt in ever growing numbers for those education courses that promise the highest rewards in terms of status. The result is that the less attractive institutions "depreciate" quantitatively or qualitatively: either their attendance drops off or they are overrun by applications from students whose previous record leaves much to be desired. If on the one hand the objective is to find some way of stemming the flow of students to the more attractive schools which would not involve freezing capacities and implementing rigid restrictions on access - and thus toughened selection procedures that would create legitimization problems; and if, on the other hand, the hierarchy of degrees is to be

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[178] Teichler, "Struktur des Hochschulwesens und 'Bedarf' an sozialer Ungleichheit," op. cit.

maintained; the solution is likely to lie in an upgrading of those courses of study that are threatening to "depreciate". This entails investing such courses or programs with some of the attributes of the course of study next up the ladder on the qualification scale in the hope this will make them once again attractive. This upgrading is likely to prove effective for a time: there is generally an increase in the number of applicants and the quality of training improves, but the students soon see only the difference that exists between their course of training and the one next up on the scale. The "depreciation" process begins all over again.

A process of this sort has already taken place in quite a number of countries, where some vocational and technical schools have been upgraded into institutions of higher education with programs for short-cycle training.[179] The problem of such actual depreciation alternating with designs for upgrading is particularly acute in countries where selection focusses to a greater extent on the formal level of education than on differences between colleges and universities due to position in the prestige hierarchy.

Changes in the pattern of pre-university selection have meanwhile led to the situation where in many countries the majority of a given cohort is qualified to enter institutions of higher education. Selection for admission takes either the form of an absolute limit being set on the number of applications that can be accepted, or all applicants wishing post-secondary education may enter, but are chancelled into one or the other institution of varying formal or informal rank.

In what seems to be a paradox in all this, access to higher education seems, statistically speaking, to be most selec-

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[179] Cf. in addition OECD, Short-cycle Higher Education, op. cit.

tive in those countries where overall university capacity is largely set by the volume of individual demand for higher education. In these countries, the proportion of those students formally entitled to higher education to those who actually enrol is relatively small. Conversely, there is a notably low rate of selectivity at the point of transition from secondary to higher education in those systems where the total number of university places is set by state planning, a bottleneck that is the subject of considerable debate.

Thus, according to a comparative study on the relation between secondary school performance and university admission during the mid-Sixties[180], university selectivity is particularly high in Japan, where only about one third of all secondary school graduates were admitted to university[181] and where it should be noted, the overall number of university places is flexible, much as in the United States, which is known for a similar level of selectivity at this juncture. So far as West Germany and France are concerned, on the other hand, countries where almost all secondary school graduates go on to university, the fact that there is an absolute lid on the number of students that can be admitted has been viewed as a major problem for some time.

The explanation for this apparently paradoxical situation lies in part in the fact that in countries where there is a horizontal secondary school structure, many students continue on into the upper secondary level without intending, at that point, to proceed later into higher education, yet they acquire

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180 Cf. Cerych and Furth, op. cit., p. 22.

181 We have set the number of first-year students in relation to the number of secondary school graduates of the same year (Teichler, Ulrich, Geschichte und Struktur des japanischen Hochschulwesens, Stuttgart: Klett, 1975, p. 199), whereas Cerych and Furth measure the number of students in institutions of higher education as a percentage of the corresponding age-group against the ratio of secondary school graduates (Cerych and Furth, op. cit., p. 22).

a formal "right", as it were, to apply to university[182]; in other countries the corresponding group does not as a rule acquire such qualification. Another reason is that there is a direct connection between limitations on the number of applicants that can be accepted and the practice of distributing applicants among a whole field of institutions with varying levels of prestige. In Japan, for example, the reason for not studying is never that there is no opportunity; the applicant is more likely to give up his plan if he determines that the only place he could study is at such a low-ranking university that a degree from that institution would give him no career advantage over an ordinary upper secondary school graduate.

The expansion of higher education has had the effect of focussing selection to an increasing degree on the distribution of university applicants among a number of institutions varying in their prestige value. How serious such problems can become is particularly evident in those countries where prior to expansion only few colleges had university standing and where at the same time little importance was attached to informal differences in rank. On the other hand, selection is made easier where there is a clear-cut prestige hierarchy among universities, as has long been the case in many countries, and where consequently applicants can be distributed among institutions of varying repute.

This difference between the restrictive and the distributive functions of university admissions is often overlooked in political debate on the numerus clausus in West Germany. According to one point of view, a place of study should be made available to every qualified applicant - be it at the university or at a technical or other lesser college, in order

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182 For a discussion for example of Japanese studies on the way the desire to go on to university develops among secondary school students cf. Teichler, Das Dilemma der modernen Bildungsgesellschaft, op. cit., chapter 2.

to soften the pedagogically negative effects of the numerus clausus. This is based on a fallacy: that secondary school students are competing as hard as they do for no other reason than fear of not being admitted to university at all. The fact is, however, that this competition focusses on securing access to one of the more desirable university departments. This distribution problem is not solved by insuring every applicant just any sort of place; if at all, it can only be overcome by breaking down the existing hierarchy of training programs, courses and schools and by expanding the capacity of those courses of study that in the past have paved the way to the more privileged careers and positions in society.

How important this distribution is becomes evident when one considers the alternative means of coordinating an expanding higher education and the needs of the occupation system - more stringent selection within each course of study (grading, examinations and the like) and in recruitment. These alternatives have obvious limitations, however.

With the expansion of higher education it appears that more importance has been accorded selection at the juncture between study and employment.[183] Thus, fewer and fewer university graduates can count on their choice of subject and school automatically entitling them so a particular occupation and status. In the first place, fewer courses of study are tailored specifically to a particular career or occupation; second, those that traditionally did offer this sort of preparation no longer necessarily carry a guarantee of employment - in as much as they did before. In addition, recruitment procedures and the traineeship are becoming institutionalized to an ever greater extent. These developments have nonetheless failed to significantly reduce the

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[183] Cf. Hartung and Nuthmann, op. cit.

pressure on selection at the juncture between secondary and higher education. For as long as there exists a clear relation between the school one attends or the course one chooses and the place one is eventually designated in the hierarchy of positions, many students try to secure the education that will give them the best possible start. Somewhat more selection has been taking place within a course of study than used to be this case. In the first place, diversification among institutions of higher education has focussed attention on the ease or difficulty of transferring from one short-cycle institution to the university or, in some countries, from a less highly regarded university to a prominent graduate school.[184] Second, it appears that in some countries there has been an overproportional increase in the drop-out rate over the course of educational expansion. Third, examination results or similar assessments of performance have been given increased attention in recruitment for top management positions and the traditional professions. However, these forms of selection appear less important on the whole than admission to a particular university or the choice of a particular course of study as the formal or informal hierarchy of institutions is becoming more highly differentiated.

We have already presented a number of reasons why in particular this development is growing in importance and not the conceivable alternatives: reduction of hierarchies and selection during a course of study on the basis of achievement.

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[184] In the United States, it appears that competition for career positions not only within but also outside the academic marketplace to some degree is carrying over into graduate school; cf. Dresch, Stephen P., An Economic Perspective on the Evolution of Graduate Education, Washington, D.C.: National Board on Graduate Education, 1974 (Technical Report, No. 1); Freeman, Richard B., and David W. Breneman, Forecasting the Ph.D. Labor Market: Pitfall for Policy, Washington, D.C.: National Board on Graduate Education, 1974 (Technical Report, No. 2); Breneman, David W., Graduate School Adjustments to the "New Depression" in Higher Education, Washington, D.C.: National Board on Graduate Education, 1975 (Technical Report, No. 3).

In many countries where universities have traditionally fallen into a clearly defined prestige hierarchy, this development was the "natural" result of differences in their financial resources, reputation, how well-connected their applicants are and how well-placed their graduates becomes.

Most planning clings to a clearly defined institutional hierarchy. According to tradition, elite education and research are institutionally interlocked, a state of affairs that leads experts to advocate preserving and reinforcing institutional hierarchies in order to secure optimal organisation and financing of research.

It is also maintained in the name of effectivity that students ought to be segregated from the very beginning according to their level of ability and occupational or professional objectives.[185] In addition, a hierarchy of universities and colleges is seen as a means of getting students to adjust their status aspirations at an early point to the level they can be expected to reach. Finally, this development is fostered by the fact that faculty and students alike are not inclined to favor any increase in selection within the universities themselves. In an echo of a pedagogical discussion going on in elementary and secondary schools, university teachers and students argue that selection causes pressures that have a ruinous effect on meaningful learning processes, and they are not at all interested in contributing, through more stringent, overt selection during university education, to maintaining the prevailing structure of social inequality.

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[185] This holds true, implicitly, for the discussion about the multiple functions of higher education in Trow, Martin, "Reflections on the Transision from Mass to Universal Higher Education," in Daedalus, 90 (No. 1, 1970), pp. 1-42.

We can say by way of summary that higher education - the one sector of pre-career education which over the course of the last 30 years has grown most in the industrialized countries of the world - has not assumed any further selection function over the course of this expansion and throughout the process of change that it has brought about in selection patterns. On the contrary, selection tends to focus on the phases at the beginning and the end of training, in particular admission to university. At the same time, there is developing an increasingly differentiated hierarchy of institutions in the area of higher education.

Such generalizations about the development of selection patterns may seem too crude in view of the differences that continue to exist. There are indeed large differences among the various industrialized countries with regard to the proportion of young people qualified for higher education, the selectivity of admissions procedures, drop-out rates, the hierarchization of educational institutions, and the importance universities attach to an applicant's school record in deciding on admission. It is difficult to speak of similarities in the selection patterns in, for example, West Germany, where admission to secondary school gives the impression of being highly selective and many Gymnasium students drop out before completing their university-preparatory course, and Japan and the Soviet Union, where university admission is of central importance to social selection, and the United States, where there is considerable selection throughout the course of university training. For all these differences and converging trends discussed in this paper, people throughout the world are experiencing certain common problems that have their root in the growing explosiveness of status distribution:

- The growing emphasis on selection in university admissions is having serious repercussions on prospective students' intellectual and social development;

- the criteria governing university admissions is increasingly the focus of political debate;
- higher education is facing institutional destabilization;
- short-cycle education is suffering from a "crisis of identity".

In the sections that follow we shall discuss these developments in greater detail.

6.3 Problems of university admissions

Debate on university admissions policy[186] has flared up above all in those countries where until recently the transfer from the "academic" secondary school to university was more or less a foregone conclusion. Yet this topic has also aroused considerable controversy in countries where the problem has already existed for a number of decades.

There is remarkable historical continuity in the issues around which debate has focussed in those countries where university admission has been a problem for a great number of years as a result of the role it has played in selection.

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186 Cf. the surveys of university admissions policy in F. Bowles, op. cit.; Unesco and the International Association of Universities, Access to higher Education: Report of the International Study of University Admissions, Vol. 2, Paris: Unesco and the International Association of Universities, 1965; Unesco, ed., Access to Higher Education in Europe, Paris: Unesco, 1968; Karpen, Ulrich, "Numerus clausus in Europa," in Wissenschaftsrecht, Wissenschaftsverwaltung, Wissenschaftsförderung, 6 (No. 2, 1973), pp. 110-126; Stewart, Gerdi, Internationaler Vergleich des Hochschulzugangs 1974, München: Bayerisches Staatsinstitut für Hochschulforschung und Hochschulplanung, 1974; Boppel, Werner and Udo Kollenberg, "Hochschulzugang und Numerus clausus," in Deutsche Universitätszeitung, (No. 10, 1975), pp. 386-398.

For example in Japan, a book appeared in 1934 describing that country's "examination hell", to which a young person was continually exposed over a period of years - despite automatic promotion from one grade to the next - up to the point where he would take the university entrance examinations.[187] Here we can read complaint that students are too much oriented toward the prestige value of the various schools, that many of those most clever in preparing for examinations show a distinct falling off in their performance once at university, and that this type of selection leads to a general "over-education". If it were not for certain specifics one would think this text had been written today.[188] In Japan, educational expansion has quite obviously not led to any fundamental change in the problems involved; the main difference between then and now is that a considerably larger number of students are involved in this competition today.

According to the afore-mentioned study, attempts were made to cope with these problems by changing the university admissions system - but to no avail. A glance at developments in Japan since the Second World War as well as in the Soviet Union and the United States shows that their admissions systems are remarkably impervious to change. It is apparently easier to bring about fundamental changes in institutional structure and curricula than to even partially correct typical problems of pre-career selection.

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187 Murakami, Komao. Das japanische Erziehungswesen. Tokyo: Fuzambo, 1934.

188 For the situation after the Second World War cf. Shimizu, Yoshihiro, "Entrance Examinations: A Challenge to Equal Opportunity in Education," in Journal of Social and Political Ideas in Japan, 1 (No. 3, 1963), 88-93; and Teichler, Ulrich, "Some Aspects of Higher Education in Japan," in KBS Bulletin on Japanese Culture, (No. 114, 1972), 1-16; Teichler, Das Dilemma der modernen Bildungsgesellschaft, op cit. Prior to this war, competition focussed on admission to the Higher Schools, which were considered the preparation ground for university study.

In some countries where the problem of access to higher education has only recently become politically explosive, admissions policy initially had little connection with reality. The result was that - partly through ignorance, partly in an effort to avoid the difficulties other countries were experiencing - procedures were often initiated which notably differed from those implemented in countries with much longer experience in these matters. When difficulties consequently arose in implementation, many of these countries went over to the type of admissions procedures used in countries with greater experience.

To give an example of this combination of inexperience and unrealistic goals, West Germany introduced an admissions policy in 1972 which stipulated that for subjects with restricted admission 60% of the available places were to be distributed on the basis of the Abitur grade average, and 40% according to position on a waiting list. Foreign students and hardship cases fell under separate quotas. An applicant's Abitur grade was revised upwards or downwards (bonus/malus) to correct for regional differences in the average grade. In addition, a certain advantage was given those applicants who had graduated from short-cycle institutions or had earned their Abitur qualification through the Zweiter Bildungsweg, an program designed to give in particular members of disadvantaged groups a chance to make a fresh start in education.

This system failed in part because there was no political agreement on the objectives.[189] Making allowance for the grade-point average discrepancies that exist from state to state was from the very beginning no adequate way to overcome the inequities that result from the application of different standards for evaluating student performance.

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189 See the discussion of this development in "Hochschulzugang," in Studentische Politik, 8 (Nos. 6/7, 1975).

Rather, it is to be seen as no more than a device, employed by the state Ministers of Education to provide their specific kind of "equal opportunity": admission to the restricted university departments for a proportionally equal number of qualified secondary school graduates from each of the states in Germany. This system failed above all because there was no way to carry through with the objectives - on the one hand selection on the basis of achievement, on the other hand opportunity to study for all who have passed the Abitur hurdle - when at the same time more and more young people continue to strive for the highest possible level of educational success. The waiting period for a number of subjects became so long that the amount of time remaining for a graduate to actually work in his profession was lessening, with the result that the government's intention of limiting the number of cost-intensive university places had become an absurdity. For if it were to cope, the government would have to expand capacity in these fields. In addition, more and more applicants for places in restricted fields were spending the waiting period enrolled in "open" subjects in the hope of acquiring additional qualifications or of having some of that time counted against the required number of semesters once they were accepted in the field of their choice. The effect was that admissions restrictions were extended to more and more departments and the cost to the tax-payer per graduate increased considerably.

As competition has increased, it has no longer seemed fair to differentiate in the evaluation of an applicant's previous record. Applicants whose grades are poor have tended to gravitate to those schools where access to the restricted subject is easier. Criticism of discrepancies in the standards applied in establishing the Abitur grade led to attempts to establish something approaching a uniform entrance examination in advance of an overall reform of university admissions, with the introduction of "norm schedules" (Normenbücher), for individual subjects examined in the Abitur.

These examples show that the objective of such procedures was not what determined reality, for as it turned out, students' consciousness of social selection in general and admissions procedures in particular had apparently been underestimated when these procedures were devised.

Now that we have seen some of the problems experienced in countries with more or with less experience in restricting university admissions, it would seem reasonable to try to identify the specific social conditions that characteristically set the framework for political options for university admissions policy - be it that such conditions limit the range of criteria and procedures up for choice, or be it that they pose typical problems when it comes to introducing alternative procedures.

1. One of the regular subjects of discussion in this context is the question of whether university admissions procedures succeed in preselecting those applicants who are best suited for study at particular universities, in particular fields, and for particular occupations. The fact is, however, that prognoses on students' future achievement and expected job performance are only of secondary importance in the framing of admissions policy.

Thus, it has hardly served to promote readiness to institute uniform admission tests in West Germany that advocates of such a procedure have insistently contended over the years that Abitur results fail to give as accurate a picture of a student's capability for study than admission tests. The situation is reversed in Japan where university admissions offices are seldom inclined to pay much attention to the applicants' previous school record, although on the evidence of empirical studies such evaluations give better indication of future achievement than entrance examinations do.[190]

[190] Cf. the analysis of available studies in Teichler, Das Dilemma der modernen Bildungsgesellschaft, op. cit., chapter 2.

There are three reasons for attaching so little importance to prognoses of future academic performance: to begin with, empirical analyses have shown that no one procedure is notably superior to all others in predictive validity[191]; their differences being so slight, it appears only sensible to pay more attention to other criteria. Second, there is a conflict between the principle of rewarding previous achievement and endeavoring to predict future performance; thus, a procedure that implicitly underlines the irrelevance of individual efforts to succeed in education, such as the I.Q. test, can hardly be conceived by the student as just measure of previous performance and hence as a reward. Third, prognoses of future performance would perhaps be an important criterium if employers were concerned about the provision of skills. Since, however, they instead fear that university graduates are "overqualified", concern about qualification deficits will not be aroused by selection procedures that have other objectives than to produce an optimal turnout in terms of potential. As matters stand, it appears there will be more than enough qualified personnel in any event.

2. It can also be observed that people are generally prepared to accept that prevailing selection procedures have an adverse effect on the output of higher education and on graduates' job performance.

There is heavy competition for admission to departments of medicine throughout the world, for the high cost of medical facilities prompts universities to place limits on the number

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191 Cf. Astin, Alexander W., Predicting Academic Performance in College, New York: Free Press, 1971; Larkin, Paul G., "The Challenge to Higher Education of National Manpower Priorities," in Journal of Higher Education, 41 (No. 3, 1970), pp. 195-203; Schumann, Karl F., and Hans J. Claus, Prognose des Studienerfolgs, Hamburg: Arbeitskreis Hochschuldidaktik, 1970 (Blickpunkt Hochschuldidaktik, No. 10); Hitpass, Josef, et al., Vorschläge für ein "Besonderes Hochschulein-angsverfahren" (Paragraph 33 HRG): Unter Berücksichtigung der von einer Expertenkommission in den USA gesammelten Erfahrungen. Gutachtliche Stellungnahme, Bonn: Der Bundesminister für Bildung und Wissenschaft, 1974, mimeogr.

of students that can be accepted, while at the same time future prospects for medical doctors are so attractive that applicants far outweigh available places - a state of affairs the organized medical profession has done its best to preserve. And although there is widespread doubt that those who survive the competition will actually turn out to be the better doctors[192], admission to medical school is for the most part determined by the ordinary criteria: a good secondary school record or above-average performance in general entrance examinations. Aptitude tests, in widespread use in the United States[193], are at best of secondary importance in selection.

Moreover, as admission requirements have tightened, the more successful secondary school graduates have gravitated to the particularly attractive courses of study, creating a hierarchy of preferred courses and fields. This is particularly evident in those countries where there is not the traditional hierarchy of universities we find in the United States, England or Japan. A degree from Harvard, Yale, Oxford, Cambridge or Tokyo University paves the way to high-ranking positions, regardless of the field a student has studied.[194]

When, on the other hand, in a country like West Germany all universities have about the same prestige while at the same time access to particular courses of study is restricted in varying degrees or not at all, the long-term

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192 Cf. the analysis of available studies in Schott, Erich and Ulrike Schott, Zur Psychosozialen Struktur von Studienanfängern der Medizin: Sozialisationsstudie zur Frage Auswirkungen des Auslesesystems, Hamburg: Arbeitsgemeinschaft für Hochschuldidaktik, 1975 (Hochschuldidaktische Forschungsberichte, No. 2).

193 Cf. ibid., Hitpass, et al., op. cit.

194 Whereas in the United States the student generally is admitted to the university or college as such, in Japan, admission is to a particular department or subject.

effect will be that less and less of the more successful secondary school graduates will seek admission to those courses of study that are generally designed to prepare one for a career in government administration or private enterprise.

3. Selection in the education system is so designed that if a student is determined to set his own course according to his interests and his personal assessment of his abilities he often has no choice but to accept certain disadvantages with regard to position.

In many countries, a secondary school student with a technical bent cannot afford to take technical courses because he has to concentrate on the general subjects which are required for admission to one of the prestigious universities, where he can then study for example engineering. A good many excellent secondary school students choose a course of study which promises entry into the higher professional echelons rather than follow their real interests and abilities in selecting a field.

In countries where there has long been stiff competition for access to higher education - such as Japan and the Soviet Union[195] - the promise of status has been an important factor in any decision about education or training. Motivation for studying has on the other hand undergone a rapid change in those countries where admissions restrictions are a fairly recent development. When pre-career selection comes to focus on university admission, people become more clearly aware of differences in the way various types of qualifications are rated and rewarded by society, knowledge that then tends to affect people's behavior.

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195 Strizek, Helmut, "Zur Lage der technischen Intelligenz in der Sowjetunion," in Osteuropa, 23 (No. 2, 1973), pp. 105-118.

This conflict between a society's system of rewards and the individual's personal interests and aptitudes has its source in a hierarchy of qualifications which to some extent corresponds to the hierarchy of occupations. What is important in this context is that this hierarchy of qualifications is reinforced by university admissions procedures that are weighted in favor of a relatively wide range of knowledge and abilities. Though more responsive to achievement, such procedures take little account of an individual's personal interests and aptitudes. It fits into this picture that tests for special aptitudes and talents are more commonly employed in connection with university entrance to such fields as music and art, fields which are only to a limited extent governed by the criteria of industrialized, competitive society and which as a rule have no central place in formal education. However, this conflict between societal reward patterns and personal talent, abilities and interests remains, as a rule, latent for the reason that a person's consciousness and appreciation of his own interests and abilities is determined to no small extent by this reward system. Consequently, educational meritocracy is what results when to be ambitious means to consider oneself at least theoretically gifted.

If it is justified to assume that people generally make a better job of their work when they have chosen their occupation on the basis of interest and aptitude, then we can surely say that any selection system that prompts people to make their decisions about education on the basis of status considerations only underscores the fact that qualification aspects have only a limited bearing on the relationship that exists between education and occupation.

4. Any precareer selection process that is primarily geared toward status distribution on the basis of achievement appears to have the side effect of promoting those personality traits that are rewarded in the occupation system,

but which run counter to the ethical objectives of education and the pedagogical convictions of many teachers. Competitiveness, aggressiveness, ability to act quickly under stress and the readiness to carry out a given job without thinking too much about it -- all these qualities appear to be promoted by the patterns of selection prevailing in education and in university admissions policies, and are welcomed by employers. On the other hand it would be exaggerating to infer from this that the output of education conforms completely with what the employers want. To be sure, the "hidden curriculum" is a very important factor in transmitting, through schools and universities, the demands society places on its members, particularly in certain areas of training. At the same time, hightened competition has effects on the qualification process that cannot by any stretch of the imagination be conceived as functional in terms of prevailing occupational requirements. The ambivalence this implies is evident, for example, in interviews with Japanese employers: if one focusses on what they say about the qualities they seek in the recruitment of university graduates, one cannot help but say that the "examination hell" appears to be altogether functional.[196] If, on the other hand, one listens to what employers say about the qualities they generally find lacking in university graduates[197] - qualities such as the ability to work independently - one could come to the conclusion that what these employers really need is less competition.

5. Central to precareer selection is reward for the kind of performance that, when stimulated by school requirements,

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196 Cf. Dore, "The Future of Japan's Meritocracy," op. cit., pp. 40-1.

197 Cf. OECD, Education Committee, Intergovernmental Conference on the Utilization of Highly Qualified Personnel-Employment Prospects in the 1970's, op. cit., pp. 68-90.

can be successively improved up to the time of formal selection. The stress is on the attainability of success and on reward for past achievements, whereby there are considerable differences from country to country. It appears that such weight is laid on these maxims because they better than others succeed in giving the impression that rewards are equitable in terms of achievement.

The importance of this principle of equity in terms of educational achievement is reflected in the fact that all selection confirms the attainability of educational success and reward for such success. This is the reason why proposals to emphasize other criteria - future occupational requirements, for example, or simple chance - generally fail to meet with approval. In addition, there appears to be a tendency in countries which have only recently introduced restrictions on access to certain fields of study for increasing importance to be attached to such an achievement-oriented principle of equity. It is also clear that the wish for demonstrative equity in line with achievement is very much more pronounced in the debate on precareer selection than, for instance, in discussion on the forms of reward in the occupation system: It is expected that such a principle and such universalistic norms dominate in education, it being in the widest sense a public sector; conversely, particularistic norms have their accepted place in the recruitment process and in selection as it continues to take place throughout a person's working life. Yet all this does is accentuate the individual aspects of competitive society: the individual can count on getting his reward in any event. Whether this sort of reward system is actually beneficial for today's society remains, however, an open question.

In hardly any other country is the attainability of success with regard to university access so strongly emphasized as

in Japan. This undoubtedly helps to explain why competition for admission there has taken on such enormous dimensions - comparable possibly only to the Soviet Union. Entrance examinations in Japan are made to order for the very diligent above all. Intelligence and aptitude are only of secondary importance. Performance in the entrance examinations almost exclusively determines whether an applicant is admitted. Thus, the secondary school student is unlikely to give up simply because he has doubts about whether he can succeed, his school record is poor or he has failed in a previous attempt. Those universities that do take applicants' school records into account award a bonus, added to the grade-point average, to those students who spend a year cramming after having failed an entrance examination. In this way, the universities seek to insure that the students do not consider such cramming a waste of time. The irony is that it is generally known that students who are accepted after a second or third try do not, as a rule, do as well in their studies as might be expected.

The criteria and procedures applied in many other countries to university admissions make it clear that chances of succeeding are less equitably distributed than in countries such as Japan, where effort is what is mainly rewarded. This undoubtedly has the effect of discouraging a number of secondary school students. As we shall see in the section that follows, this does not, however, suffice to challenge achievement-oriented equity as the dominant principle.

6. There are bound to be imperfections in a system of selection based on the principle of achievement, as applied in university admissions, but the fact that they exist does not prevent such selection from serving to stimulate greater effort and to legitimize the structure of social inequality. A "moderate educational meritocracy"[198] is not only more

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[198] See above, section 5.4. By promoting access to higher education for minorities, admissions on the basis of social criteria have made the university degree less relevant for occupational position in the United States.

tolerable for those involved than reward purely on the basis of individual achievement; under certain conditions, it can also stimulate efforts toward greater educational achievement.

It is the practice in a great many countries to admit a certain number of students to the elite universities as a matter of social policy, even though they may fail to meet the necessary requirements. Such deviation from the principle of achievement-oriented equity does not affect the prestige of these institutions, nor does it make university degrees any less relevant for the distribution of occupational positions. And although this principle's universality is challenged by the fact that there are always those whose social background creates certain "hereditary" privileges which in turn have some bearing on status distribution as a whole, this principle nontheless continues to determine the behavior of the majority who know that so far as they are concerned the only way to higher positions is through success in education.

The same holds true for the connection between the selection that takes place through university admissions and any correction that may be possible at the point of recruitment and during the period of employment. As long as there exists a certain positive correlation between being admitted to university and a person's subsequent socio-economic status, there is no plausible reason why one should cease trying to obtain more prestige education. One study on university admissions policy in Japan gives as explanation for the extreme nature of competition in that country that this is the only time in a person's life when universalistic standards are paramount[199]: every effort seems justified since now

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[199] Cf. Vogel, Ezra F., "Entrance Examinations and Emotional Disturbances in Japan's New Middle Class," in R.J. Smith and R.K. Beardsley, eds., Japanese Culture. Its Development and Characteristics. Chicago, Ill.: Aldine, 1962, pp. 140-152.

and at no other time is success attainable even by those who have no privileges to fall back on, and because every measure of success in education brings some sort of reward later on, when one is employed.

Seen in this light, the proposal often heard in West Germany according to which a brake should be put on the expansion of higher education by means of a public service reform, opening higher level jobs to nongraduates as well as university graduates, appears to be a rather dubious cure-all. For as long as a university degree gives better promise of a job in public service and altogether better chances of advancement, it would seem to be taking an unnecessary risk or be at least rather circumstantial for a qualified person not to attend university.

At the same time, imperfections in regard to the principle of achievement-oriented selection can have both stimulating and legitimizing effects. This can be shown once again by the example of Japan: there, the choice of university - and each university has its own form of entrance examination - carries with it different chances for each individual; furthermore, this examination is held only on a single day, so that luck plays a considerable role; the result is that cramming for such examinations is worthwhile even for the candidate whose previous school record might otherwise be discouraging. The fact that it is difficult for the ordinary person to figure out just how the admissions system works, plus the opportunity to repeat the examination, are factors that also contribute to this picture.

Finally, a certain element of chance may help to legitimize the system of social inequality. Whereas it is apparently easier to accept inequality if people believe they have an opportunity to frame their own success, the element of chance makes it easier to accept failure.

7. It has proved difficult as a rule to genuinely combine principles in university admissions policy - in other words, to uphold several principles on the same level of priority, one of which being the principle of achievement-oriented equity.

In most countries a whole wealth of solutions have been devised for the various sectors of higher education, in some countries in pragmatic response to actual developments, in others as an outcome of debate on the pros and cons of procedures that stress achievement-oriented equity. There have been procedures especially designed for single sectors of higher education, as well as special provision for hardship cases, for the economically and socially disadvantaged (or privileged!) and for the employed, not to mention incentives designed to overcome bottlenecks in certain fields. But it has hardly ever been attempted to place some other principle side by side with the principle of achievement-oriented equity in university admissions. The following examples may serve to illustrate this problem:

- In the Soviet Union, about one-half of the places available in higher education during the Fifties were reserved for persons with a certain amount of job experience. This quota was drastically reduced in the Sixties because the practice was felt to be counterproductive to achievement and had led to a decline in the overall pre-university educational niveau.[200]
- Around 1970 a number of highly regarded universities in the United States declared their willingness to lower the requirements for admission considerably in the case of

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[200] Cf. Glowka, Detlef, "Numerus clausus: Darstellung eines Problems am sowjetischen Beispiel," in Osteuropa, 20 (No. 11, 1970), pp. 751-775.

disadvantaged youth. Open access had existed prior to this offer, but only at institutions with little prestige and it had only a negligible effect on the prestige hierarchy of educational degrees. On the other hand, the most notable experiment - in which the City University of New York agreed to admit all high school graduates who had finished in the top half of their classes - meant in effect the introduction of a countervailing principle, in view of the fact that secondary schools differ widely in achievement level.[201] It is too early to say whether a genuine "combined principle" is emerging as a result, or whether those better-known universities that practice open admission simply lose prestige as a consequence and slip back into the class of institution which has always admitted almost every applicant.

- In the Netherlands, only part of the vacancies in restricted-admissions subjects are filled on the basis of school record; the applicant must have attained a certain very high, predetermined grade-point average. The remaining openings in these fields are distributed by lot.[202] This practice of rewarding the achievement of a minority and of letting chance decide for the rest remains, today, a highly controversial formula.

- In Sweden, all persons who have had five or more years of job experience are entitled to study in fields related to their occupations.[203] It remains to be seen whether this has created a truly equivalent second means of access to higher education or is only another aspect of the overall hierarchization in higher education.

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201 Attention is drawn to this fundamental difference by Karabel, Jerome, "Open Admissions: Toward Meritocracy or Democracy?", in Change, (No. 13, 1972), pp. 38-43.

202 Cf. "Numerus Fixus," in Onderzoek van Ondervijs, 3 (No. 3, 1974).

203 Persson, Rune, The Swedish Experience, Paper presented at the Conference on "The Contemporary European University: Mass Higher Education and the Elitist Tradition," Graduate School and University Center, City University of New York, June 16-19, 1975: mimeogr.

- Access to restricted-admissions subjects in West Germany is regulated on the basis of Abitur grades and position on the waiting lists, as we have already described. The problems this has created have been so great that solutions are now being proposed that would once again place the stress on achievement.

6.4 More recent stratification tendencies in higher education

In view of the growing demand for admission to the universities and the continuing requirement that the education system functions as a selection mechanism, experts in education planning some years ago became very enthusiastic about the idea of short-cycle education. Such programs seemed to offer students a chance to study the subject of their choice at a tolerable cost to the taxpayer while at the same time maintaining a clear-cut hierarchy of universities and colleges.

In 1973 a conference report was published by OECD, forecasting and in the same breath advocating a very heavy expansion of short cycle education - another example of this organization's tendency to confuse empirically substantiated prognosis and normative option.[204] This report described how in the years since the Second World War vocational colleges have been upgraded to just short of university status in many countries, while in other countries short cycle education has considerably expanded. In terms both of the institutional structure of higher education and long-term development planning, great

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[204] OECD, Short-cycle Higher Education, op. cit.

differences have remained between the various countries[205]; OECD nonetheless considers itself in a position to pinpoint a number of common objectives in the expansion of short-cycle education. These objectives are:

- to cope with the increased numbers of applicants for higher education;
- to promote equality of opportunity by providing training programs designed to meet the "needs" of the less privileged classes (sic!);
- to take account of manpower requirements by supplying certain needed qualifications and by avoiding any excess number of graduates who are too highly qualified and too theoretical in approach;
- to promote innovation in higher education.

Only a few years after this OECD conference, doubt began to be raised as to whether this sort of expansion in short-cycle education was to be expected in most countries after all.[206] The immanent weaknesses of the concept became apparent even before it could be fully carried out.

Apart from this rather dubious prognosis, the OECD study presented a great many interesting detailled observations which even at this point impressively demonstrate how the prestige gap between such short-cycle institutions and the full-fledged universities gives cause for the permanent identity crisis from which this type of education suffers.

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205 The previously mentioned OECD report cites the following existing models: the multipurpose, the specialized, and the binary model; cf. Furth, Dorothea, "Short-Cycle Higher Education: Some Basic Considerations," in Short-Cycle Higher Education, Paris: OECD, 1973, pp. 15-19. In applying these models to the whole system of higher education OECD undertook to classify the emerging structures (as well); these are integrated comprehensive university model, binary model, combined development model, and first cycle multipurpose model; cf. Cerych, op. cit., pp. 21-23; cf. in addition Duperre, Maurice, "Global Development of the Two-year College Concept," in Higher Education, 3 (No. 3, 1974), pp. 315-371.

206 Cerych, op. cit., pp. 29-31.

"Such a value scale is obviously unsuited to the present needs of society and even less so to the emerging system of mass higher education which, on the contrary, requires a wide institutional diversification without, or with a minimum, institutional hierarchy."[207] The fundamental contradictions of status distribution do not, however, disappear in the mystifying contention that a society that is characterized by inequality with regard to socio-economic status is in no need of a hierarchy of degrees and occupational opportunities.

For all this, proposals to expand short-cycle education are being given a great deal of attention in West Germany, where the "baby boom" is swelling the ranks of qualified applicants and there appears to be considerable interest in preserving the university - with its "regular" courses of study - as the instrument of elite education.[208]

The problems connected with higher education on the non-university level have multiplied with the development of a system of mass higher education. Three examples may serve to explain this development.

Parallel to the development in many other countries, the formal hierarchy of institutions of higher education in West Germany[209] has expanded to include institutions which previously had figured as the highest ranking schools in the field of vocational training. Before this, it had been

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[207] Furth, op. cit., p. 38.

[208] Cf. Wissenschaftsrat, op. cit.

[209] Cf. the analysis in Teichler, Ulrich, Kurzstudium in der Bundesrepublik Deutschland, Berlin: Max-Planck-Institut für Bildungsforschung, Manpower-Gruppe, 1973, mimeogr.; cf. in addition Goldschmidt, Dietrich, and Hübner-Funk, Sybille, "Von den Ingenieurschulen zu den Fachhochschulen," in Deutscher Bildungsrat, ed., Gutachten und Materialien zur Fachhochschule, Stuttgart: Klett, 1974, pp. 11-219.

possible to attend engineering school after having completed lower secondary school as well as an apprenticeship and a certain number of years of practical experience. In the mid-Sixties these schools were upgraded into "special institutions" belonging neither to vocational training nor properly to higher education. At the same time their best graduates were given an opportunity to continue their studies in the engineering departments of the regular universities.

As more and more young people sought to continue in the academic track of secondary school and on to university during the Sixties, the engineering schools and similar specialized institutions were threatened by a process of depreciation that affected them both quantitatively and qualitatively. The rate of applications declined drastically, i.e. the number of applications decreased steadily in relation to the amount of places available. At the same time there was a drop in the general academic level, caused by the need to admit students who were not as well qualified as used to be the case. There was increasing fear that the graduates of these engineering schools would be at a professional disadvantage in relation to university graduates in engineering, a fear that was reinforced by uncertainty about whether the engineering school certificates would be internationally recognized. In the late Sixties, students and teachers at these institutions demanded their incorporation in the university system.

Although up to the very end industry spokesmen insisted that engineering training had been quite satisfactory the way it was, the engineering schools were upgraded after all. They, together with a number of other similarly specialized institutions were transformed in 1971 into vocational colleges, the Fachhochschulen. At the same time, a vocationally oriented, though shorter type of upper secondary school was created, the Fachoberschule; from this point on, either a diploma from

this type of vocational secondary school or the regular Abitur would qualify an applicant for admission to the vocational college. At the same time, graduates from these vocational colleges were granted a certain advantage in transferring to the university.

Addition of the word "college" plus heightened entrance requirements were designed to enhance the attractiveness of these institutions. The fact, however, that the new type of college still bore the onus of being vocational institutions indicates that there was to be no tampering with the old institutional hierarchy. Some of those concerned lauded the innovation, saying that now at last students would be free to choose their field of study purely on the basis of interest and aptitude. Yet the new course in engineering threatened to depreciate even before they had produced their first graduates. For the differences that remained between this type of degree and a university degree now became more apparent[210], as the following examples show.

- The establishment of vocational upper secondary schools and the equivalence of diplomas from these schools with the more "academic" Abitur (so far as access to the Fachhochschule was concerned) was initially greeted as a very important step in raising the status of this type of education. When, however, only very few graduates from the academic upper secondary school - the Gymnasium - showed interest in studying at a vocational college and this began to give the appearance of constituting negative

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210 The loss in attractiveness of technical colleges varied considerably, however, according to subject, depending on the institution's rating before being upgraded to the rank of technical college as well as on its graduates' occupational prospects in comparison to university graduates in the same field. Cf. Teichler, Ulrich, "Struktur des Hochschulwesens und 'Bedarf' an sozialer Ungleichheit: Zum Wandel der Beziehungen zwischen Bildungssystem und Beschäftigungssystem," in Mitteilungen aus der Arbeitsmarkt- und Berufsforschung, 7 (No. 3, 1974), 197-209, esp. p. 206.

selection, it became clear that students enrolled in these programs had neither the practical experience that had been one of the advantages of the old type of training, nor the caliber of pre-university training required of regular university students.

- The opportunity to transfer to the university was viewed as one of the positive aspects of this upgrading effort, for it prevented the vocational college from appearing to be a dead-end road. However, this arrangement would only have been a genuine upgrading if students had availed themselves of the opportunity only in exceptional cases. The paradoxical strategy of letting educational aspirations "cool out" by raising the incentive to study apparently failed to function as it was hoped it would. Before long more than half of the graduating class at some of these vocational colleges was found to be planning to transfer to a university upon graduation.

- Nor has it proved possible to find a curricular solution which would have given these vocational colleges institutional stability. The previous strong practical orientation of such training came to be seen as a stigma and as justification for lower status. Such emphasis on the applied aspect could hardly be carried over into the upgraded institution. For one thing, students' pre-college training had changed in addition, it soon became clear that what employers actually wanted was less a "practical" training than a certain attitude, a willingness to accept lower status. This became evident in the way they voiced their dissatisfaction when despite their opposition the vocational colleges were established: what they were interested in seeing now was flexible training and employees that are moderate in their demands.[211] On the other hand, the

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[211] Cf. Schlaffke, Winfried, Akademisches Proletariat?, Osnabrück: Fromm, 1972; Dichgans, Hans, "Was erwarten die Unternehmer vom wissenschaftlichen Nachwuchs?," in Deutsche Universitätszeitung, (No. 8, 1974), 326-7.

curricular adjustments designed to facilitate transfer to the universities have destroyed to some extent the particular character of vocational training, with the result that the vocational colleges gained the reputation of being a qualitatively inferior replica of the university.

In looking for a way out of this difficulty, one of the first proposals was to set up comprehensive universities - in effect, a new upgrading in response to the rapidly developing tendency toward depreciation. Attempts to justify using the comprehensive university to preserve hierarchy could hardly be reconciled with the argument that this type of university should prevent prestige differences from developing between various courses of study. Moreover, the cycle of depreciation and upgrading was repeating itself at such short intervals that it seemed as if the new distinction was doomed to failure even before it could be properly created, with the next step but one being planned simultaneously with its predecessor. As time went on call grew louder for making the transfer from vocational college to university more difficult; considering students' growing awareness of the factors involved, this co ld only lead more and more of them to seek the direct way into the universities.

Other areas of West German vocational and occupational training have seen a similar development. As long as there was so little general interest in education that it was considered more important to advertize training opportunities than to worry that such programs might depreciate, demand for reform in this sector of education was confined to a relatively powerless minority. As however motivation began to grow among young people and people became concerned about applying equal opportunities policies to education, the idea of integrating academic and vocational training grew in popularity, and suddenly there was talk everywhere of reforming vocational training. For existing hierarchies can best be preserved when upgrading is applied in the smallest doses needed to keep depreciation in check.

Demands that vocational training be upgraded and that priorities in educational policy be reset accordingly are to be traced not to any particular qualification requirements or to any concrete ideas about the objectives educational processes ought to have. On the contrary, what lies at the root of such demands is worry that expectations could be awakened in the process of a longer period of qualification that could then be directed at society. In West Germany this became quite evident when the time came for proposals on vocational training to be transformed into concrete programs - which proved to be a failure.

Fundamentally related problems have also emerged in countries where short-cycle education has developed independently of any upgrading process such as we have seen in the case of West German vocational colleges. In the United States, for example[212], a number of short-cycle institutions - junior colleges or community colleges - have long been accredited as full-fledged institutions of higher education. Study at these colleges often centers around a general education program, which facilitates transfer to a four-year college or university while at the same time preparing the student for employment in a whole range of jobs in a society that has not necessarily seen specialization as an advantage over a broader spectrum of qualifications so far as employment opportunities are concerned. Many undecided students have preferred to go first to one of these junior or community colleges; in many instances, this has appeared to satisfy their desire for education.

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212 See in particular Karabel, Jerome, "Community Colleges and Social Stratification," in Harvard Educational Review, 42 (No. 4, 1972), 521-562; Karabel, "Open Admissions: Toward Meritocracy or Democracy?", op. cit.; in addition, Carnegie Commission on Higher Education, The Open-door Colleges: Policies for Community Colleges, New York: McGraw-Hill, 1970; Corcoran, T.B., "Community Colleges: The Coming Slums of Higher Education?", in On Learning and Change, New Rochelle, N.J.: Change Magazin, 1973, 104-119; Cross, K.P., Beyond the Open Door, San Francisco: Jossey-Bass, 1971; and Richter, Ingo, "Das amerikanische Community-College," in Schulmanagement, 1 (No. 4, 1973), 54-57.

The expansion of higher education has had a down-grading effect on these colleges. As universities and four-year colleges expanded, junior colleges had to make do with the applicants they could get, students whose high school training was poorer from one freshman class to the next and whose job prospects were dismal to begin with. The process of depreciation we have described earlier in these pages has become evident in a decline in applicants to private junior colleges; how critical this situation has become is reflected in the title of an article on this subject in which community colleges are labelled the potential "slums of higher education".[213]

Three measures have been specifically designed to correct this situation. Many of these colleges sought to improve their reputation, for instance, by setting up a full four-year program for those students who wanted it. In addition, systems such as the State University of New York and the California State University were set up to encompass several types of institution. This allowed some junior colleges to share in small part in the prestige accorded their more famous "big brothers" and in some cases facilitated transfer from a junior college to a four-year institution. Finally, there developed what has been called a "new vocationalism"[214]: quite a number of two-year colleges shifted away from their traditional general or liberal education approach, focussing instead on vocational training in the hope that such practical training would give graduates a better chance on the job market.

This latter step may give the impression that junior colleges are developing a new sense of identity. This does not, how-

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[213] Cf. Corcoran, op. cit.

[214] Hitchcock, James, "The New Vocationalism," in On Learning and Change, op. cit., pp. 91-103.

ever, appear to be the case. It is uncertain whether this type of new curricular focal point does not in fact represent an overreaction to the current difficulties graduates are having in locating employment, for such changes might give them a negligible advantages in recruitment; or whether these changes have substantially improved occupational training and at the same time have an impact on the relationship between education and occupation so far as qualifications are concerned. In any event, one can expect that the junior and community colleges that shift the focus of their program, often requiring instructors to teach subjects for which they are not trained, will fall even further behind the well-known universities so far as the quality of their education is concerned. The great variety of higher education in the United States and the confusing picture it presents makes it difficult to draw clear conclusions. It does seem fair to generalize, however, that low-ranking colleges try to keep above water by offering any number of vocational courses and continuing education even though they are fully aware of the fact that their students can only count on lower-ranking occupational positions once they are finished.

In Japan, the School Education Law of 1947 provided that all institutions of higher education be transformed into four-year colleges or universities.[215] This was part of the "New System", designed to create a horizontally structured system of education. Only after this system was finally implemented in 1949 were provisions added for the establishment of junior colleges, which were intended as provisional institutions. Before long, these junior colleges had become a permanent feature of Japanese higher education, although almost ex-

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215 For general information on short-cycle higher education in Japan cf. Shimizu, op. cit., and Teichler, Das Dilemma der modernen Bildungsgesellschaft, op. cit., pp. 148-158.

clusively a female preserve; women, assuming that their future prospects are less dependent on their college degree than men are inclined to believe, were more willing to take up studies at a junior college.[216]

At the same time, less prestigious universities sought to pattern their courses on the programs of the more famous institutions in an effort to become more attractive. Curricular conformity could not, however, prevent differences in prestige from deepening and the institutional prestige hierarchy from becoming even more differentiated than before. In the first place - and this applies generally to upgrading through conformance - differences in prestige become more obvious when curricular distinctions disappear. Second, the Japanese government was not prepared to distribute funds for higher education on the basis of an equalizing policy; on the contrary, the differences in funding between the universities as well as in expenditures per student widened to the advantage of the more famous universities.

In response to this development it was decided in 1961 to establish technical colleges the following year. The 1964 White Paper on Higher Education states: "The system of higher technical schools stands apart from the single-line 6-3-3-4 system, and adopts a unique progression form of 6-3-5. This is an epoch-making change in the post-war Japanese education and much is expected from its development."[217] The point was not to eliminate the hierarchy but rather, in a manner

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216 On the development of junior colleges in Japan cf. the articles on this subject in American Association of Junior Colleges, International Development of the Junior College Idea: Articles Reprinted from the Junior College Journal, Washington, D.C.: American Association of Junior Colleges, 1970.

217 Blewett, John E., Higher Education in Postwar Japan: The Ministry of Education's 1964 White Paper, Tokyo: Sophia University Press, 1965.

of speaking, to outfox it - length of education being an important criteria in allocating status. Thus, by taking a greater number of obligatory courses, especially in technical fields, technical college graduates were to be able to arrive at the same level of qualification after 14 years of schooling as university graduates have after altogether 16 years of education.

The government took a number of steps to help insure that this development would bear fruit. Technical colleges were established, in the beginning, only in the field of engineering sciences, where job prospects were considered good; there were generous funds available; a gradual quantitative expansion was designed to insure that education remained high in quality; sufficient scholarships were available; and at the same time it was announced that a high standard of achievement would be expected. The employers' circles that had repeatedly called for such institutions promised that their graduates would have the same professional opportunities as university graduates.

It soon became apparent, however, that even these attractive conditions were not enough to compensate for the downgrading effect produced by the continuing influx of students into the universities' engineering departments. On the basis of employers' recruitment behavior - they admit to giving technical college graduates lower starting salaries than graduates from even the less prestigious universities - it is assumed that technical college graduates' overall qualification level is lower than that of almost all university graduates and that their special qualifications do not justify special renumeratio We can assume that the public sees the employers as the ones who by their calculations have set in motion the vicious circle that operates when hierarchies are fixed, for in the first year the ratio of applicants to students accepted by the technical colleges was very high, then however it fell dramatically.

Although the government has officially adhered to its plan of continuing to expand the technical colleges, the number of first-year students grew only by one percent between 1969 and 1974, in contrast to 26 percent for the rest of higher education. The Central Council for Education, the Education Ministry's highest ranking advisory board, has proposed an institutional diversification to counter the tendency toward a hierarchy that in terms of curricula is relatively uniform.[21] On the other hand, their proposal of letting technical college graduates automatically continue their studies in university graduate schools gives unwitting evidence that they doubt that institutional diversification can do away with attempts to raise the prestige of an institution by showing students how, once in it, they can get out and beyond it.

In view of the problems a hierarchical system of colleges and universities raise, together with the difficulties involved in apportioning applicants among these institutions, one obvious solution would be for more selection to take place throughout the process of university education. The West German concept of the "comprehensive university" represents one such solution. Since debate on such plans has been particularly intensive in that country and a number of institutions of this sort have been established there, we shall treat the problems that have arisen in the process in some detail.

In West Germany, the idea of the "comprehensive university" became very popular around 1970. Just as was the case a few years earlier during efforts to bring about expansion in higher education, advocates of this reform have very diverse

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218 Cf. Ministry of Education, Basic Guidelines for the Reform of Education, op. cit.

purposes in mind. One is the hope that this will serve to divert more students away from the traditional courses of university study; another purpose is to give all students an opportunity for at least a certain measure of academic training; and finally there is the objective of gradually eliminating the degree hierarchy altogether.

Too many models and proposals have been discussed to recount them all in these pages. On one extreme there was the proposal that students who will eventually graduate with a short-cycle degree from an integrated, comprehensive university should have the opportunity to take the same courses as those students do who are enrolled in a regular program, the only difference being that the former would need fewer courses to graduate (modular comprehensive university or Baukasten-Gesamthochschule).[219] On the other extreme there was discussion about forming a loosely organized system of colleges and universities of various types (the cooperative model) in which transition from one level to the next within a given field would only be possible after qualifying and/or final examinations.[220]

Turning to the problems of selection connected with a hierarchical institutional structure, any attempt at realizing the comprehensive university was bound to run up against the following difficulties[221]:

1. All comprehensive university models that envision more or less identical course content for both the short-cycle

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219 Von Weizsäcker, Ernst, et al., Baukasten gegen Systemzwänge: Der Weizsäcker-Hochschulplan, München: Piper, 1970

220 On the various models, see the survey in Kramer, Wolfgang, "Zum Problem der Gesamthochschule," in Berichte des Deutschen Industrieinstituts zu bildungs- und gesellschaftspolitischen Fragen, 4 (No. 3, 1972).

221 Cf. Teichler, "Struktur des Hochschulwesens und 'Bedarf' an sozialer Ungleichheit," op. cit.

and full-length programs - i.e., the "modular" and the "Y"models[222] - run the danger of having the short-cycle program look like the "little brother" of the regular-length program: The short-cycle program is not sufficiently specific; so that for instance what was meant to be a "practical" engineer turns out to be a "small-time" engineer. More academic specialization is achieved at the cost of the kind of specific qualification which permits a certain occupational identity and which meets a specific market need. For this reason, the type of upgrading that all but automatically focusses attention on the "big brother" is soon bound to show signs of erosion.

2. Notions such as the "modular" model which stress the university's structural "openness" and assume that students' individual demand for education will insure that there is satisfactory selection, appear to be particularly difficult to put into practice. Bearing in mind how important it is that social inequality be legitimized, it is easy to imagine that such a model, if applied, would be the last to have a "cooling out"[223] effect on educational aspirations - in other words it would anything but encourage students to foresake trying to obtain the most attractive certificates possible. In addition, this model is likely to present more difficulties than other models with regard to organizational implementation. Bearing in mind that this model's objective is to democratize society by democratizing education, there appears

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222 According to this model, all students are to take part in the same first phase of studies; after approximately two years of study one part of these students is given the opportunity of continuing in an academic course, whereas the others go on into a shorter, vocationally oriented course of training.

223 Cf. Clark, B.R., "The 'Cooling-out' Function in Higher Education," in American Journal of Sociology, 65 (1960), 569-576.

to be something dubious about a system that desires selection while stressing its openness and which accepts the implication that failure is a personal matter. It is difficult to determine whether the model's advantage - that is would let everyone have a share in academic education - outweighs these liabilities.

3. The pressure to upgrade lower-ranking institutions will certainly not be alleviated by channelling the great majority of students into short-cycle education, leaving full-length higher education to the select few whose subjects require longer training.[224] Such attempts at "re-elitizing" full-length university study are not to be reconciled with the tendency for students to become increasingly aware of - and responsive to - status differences. This is borne out by the recently established fact that the number of West German students applying for admission to restricted subjects is growing at a far faster rate than the number of applicants for admission as a whole.

4. And finally, there is the proposal that differentiation should take place only after students have taken their first degree - the so-called "consecutive" model. Its weakness lies in its overestimation of the "cooling-out" effect it assumes such first certification will have.

Initial experience with comprehensive universities only confirmed the outcome predicted in the debate that had preceded their founding. Hopes quickly died that these institutions would provide a solution to the problem of selection by, as it were, crowding students out of the more attractive courses

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[224] Cf. Wissenschaftsrat, op. cit.

of study. The result was that many advocates of this sort of policy dropped the idea altogether, yet failed to offer any kind of convincing alternative in its place.

These examples show that in view of growing educational aspirations under the prevailing conditions of social inequality, such special programs for short-cycle higher education can hardly be stabilized and are bound to plunge into an almost unresolvable crisis of identity - regardless of whether these are independent institutions or part of a larger system encompassing prestigious institutions at the top. Planners' hopes for such short-cycle education and such models as the "comprehensive university" stand in stark contrast to these institutions' natural susceptibility to crisis.

7. Political consequences

There is both disappointment that the expansion of higher education has not brought about the fundamental social change many people had hoped it would, as well as fear - from another quarter - that it is doing precisely that. Both reactions have had the effect of producing over the last few years quite a number of radical proposals for changing the selection function of education. Without going into individual plans in detail, we should like to discuss a number of the fundamental assumptions behind such proposals.

A number of experts in the field, proceeding from the question of whether recent educational expansion has had any effect on social inequality, conclude that there have hardly been any tangible results to date; they recommend that policies designed to promote equality focus on other areas such as incomes or social policy. A number of the comments about the negligible equalizing effect of educational expansion give the impression, however, that the overriding goal now is not equal opportunity but equality, making it easier to show that current

education policy has failed. By no means does this line of argument necessarily follow from egalitarian goals, however.

The idea of a policy designed to create equality directly (as by means of incomes equalization) sounds tempting indeed, especially when the indirect way - through education policy - proves to be so difficult. Yet there are a number of objections that can be raised to any proposal to implement a "direct" policy in place of the more "indirect" approach:

- Such concepts reveal an astonishing confidence in the possibility of effecting social change through political means. If education fails to work today, they seem to be saying we can try incomes policy tomorrow. If resistence to equalization is as great as it was seen to be in the course of educational expansion, it is hard to see what possibilities for action are to be found in incomes and social policy, where the whole problem of inequality is only too obvious and immanent.

- It is clearly possible in our competitive, achievement-oriented society to justify the existence of enormous differences in income and, accordingly, in life chances - not, however, the practice of keeping large parts of the population stupid. This applies all the more when the amount of education a person qcquires has a strong effect on life chances. Since however educational differences are central to the legitimization of social inequality, any reduction in these differences will serve more than any other measure to challenge social inequality, on the basis of the intrinsic logic of the reward system.

- This argument for indirect equalization through education instead of a - hardly realizable - direct approach can only stand if there is at least some possibility that inequality can be reduced through education. The expansion of higher education may not yet have succeeded in substantially affecting the structure of social inequality, but there have been a number of notable modifications in the pattern. These are

too easily disregarded by those who know no middle way between optimism and resignation.

- It is also of fundamental concern in this context to establish whether despite a relatively stable hierarchy of positions significant changes are not taking place in other spheres of life. A lessening of inequalities in the area of consumption, in opportunities for leisure-time activities, in the amount and quality of information people possess, and in their opportunities to participate in political life can also be seen as an important result of educational expansion. Nonetheless, such aspects are not the focal point of considerations about how educational expansion can have an equalizing effect: a person's job or profession is so central that equalizing tendencies elsewhere, provided they are restricted to such peripheral spheres, represent little more than a sop and, in the last analysis, have only an ideological function.

- In view of the gradual elimination of educational differences and the relatively stable nature of the structure of social inequality (smaller differences in education being given the same weight in selection and legitimization as used to be given major ones), it is quite conceivable that the process of adjustment between education and occupation will fail, at some point in the future, to legitimize social inequality. As time goes on, the use of differences in education to justify social inequality could come to seem artificial if there no longer exists a substantive correlation between the requirements for a given degree and the skills required to carry out a job. Since it is not to be expected that inequality will be legitimized solely on the basis of in-career selection, one cannot rule out the possibility that this will put an end to any successful justification of prevailing inequality.

- It may be that on the long run educational expansion will succeed in reducing the social inequality that is manifest

in the hierarchy of occupations. If a levelling off of educational differences has the effect that the lower an employee's position, the more he is "overqualified" in the traditional understanding of what skills are required, then there exists an untapped potential that would permit occupational tasks to be redistributed and decision-making on the job to be reorganized. Whether such changes actually come about will depend not only on the quantitative development of manpower supplies but also in part on other factors such as the content of a course of studies and its socializing effects. We will not be able to determine whether or not educational expansion actually has an equalizing effect until we establish whether there exists at least a tendency toward the type of changes we have been describing in regard to the organization of work and the occupation structure.

It is of little matter whether increasing numbers of people view university study as a special "sphere of immunity" where little effort is put into creating a substantive relationship between education and eventual occupation, or whether the emphasis is on those aspects of training that promise to give the student even a slight advantage later, in competition for a job. Whichever is the case, it is likely that the graduate will feel very helpless indeed when finally confronted with the actual requirements of a job. This being the case, the above-mentioned potential for changing an occupational role will remain latent, at least for the time being.[225] Perhaps educational expansion can only have an equalizing affect when the education system is able to provide the kind of qualification that will enable students to later take an active part in shaping the organisation of work and their occupational roles, and when furthermore these

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[225] Cf. the analysis of the development in Japan in Teichler, Das Dilemma der modernen Bildungsgesellschaft, op. cit.

learning processes are connected with the development of a motivation and goals that are directed toward the application of the skills and knowledge one has acquired.

In contrast to this direct equalization approach, the majority of these "radical" proposals proceed from the assumption that the structure of social inequality is impervious to changes in the education system; the focus tends to lie on other objectives such as bringing about a closer correlation between training and occupation or reducing competition in the education system. These positions are what concerns us here.

Many of the proposals aimed at systematically changing the situation have the underlying objective of putting a stop to educational expansion altogether. Most such proposals can be subsumed under one of four models:

a) a model for taking selection out of pre-career training;
b) a personal demotivation model;
c) a "structural moderation" model; and
d) a model for planning according to presumed manpower requirements.

Proposals aimed at putting a stop to educational expansion by taking the burden of selection off of pre-career education have the underlying purpose of (re)harmonizing the relationship that exists between status distribution and qualification by making reward for education contingent not on pre-career certification but rather on qualifications attained during a working life. The point is to put a limit on pre-career education - the most extreme method being "deschooling"[226] - and to set up a comprehensive system of in-career qualification schemes, such as "recurrent education"[227], which should

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226 Lister, Ian, ed., Deschooling: A Reader, London: Cambridge University Press, 1974.

227 OECD, Recurrent Education: A Strategy for Lifelong Learning, Paris: OECD, 1973.

permit education to be supplemented in a flexible manner, be it in answer to particular skills requirements on the part of the occupation system, be it in response to some personal desire for additional training. Such structural reforms are envisaged as a means of preventing pre-career education from lasting ever longer and from deviating yet further in curriculum from the presumed qualifications requirements of the occupation system. This is also the purpose of demands that limits be placed on the reward that can be given for credentials acquired in pre-career education.

This type of approach fails to take into account certain problems that are connected with status distribution. To begin with, the underlying assumption is that long courses of study or training will not be eliminated, but they will be available only to a very limited number of persons. Under today's conditions this would practically amount to turning higher education back into an elite institution and, consequently, intensifying competition for access to such courses of education. Second, it appears to be impossible to do away with the relevance of pre-career education for status distribution. Once people have become sufficiently aware of the social hierarchy and of the role educational degrees play in securing high-status positions in society, it is no longer possible to institutionalize selection-free zones.

Third, such a development would make it possible to lift the prevailing limitations on in-career competition, limits that have existed by virtue of the emphasis that continues to be placed on pre-career competition. The unavoidable consequence of this - or the ideal situation, depending on one's point of view - would be life-long competition for socio-economic status. Fourth, the call for intensified in-career selection tends to ignore demands for formally equal chances for access to those courses of study and training that are relevant to

status distribution, and fails to take into account the fact that people expect selection criteria to be transparent and universal - demands and expectations that have arisen in connection with the legitimization of a social inequality that is stamped fair simply because it is the outcome of competitive performance. For as experience has shown, these demands and expectations are met less in the occupation system than in the education system.

The personal demotivation model has proved to be equally problematical. It seeks its justification in arguments that fail to take account of the real relationship that exists between socio-economic status and education. In contending that an "academic proletariat" is threatening to develop, advocates of this position are insinuating that university graduates tend to be at a disadvantage in the allocation of positions when their numbers increase beyond the occupation system's presumed manpower requirement. This argument, though never completely abandoned, did lose considerable ground when it became apparent that the market mechanisms that were supposed to function in distributing reward for education simply do not exist in the form people assume they do.

In contrast, the past few years have seen an increase in demotivation efforts justified by the argument that equal opportunity policy is a total failure. On the one hand conservatives, opponants of any strong expansion in higher education, took up this line of argument as a means of striking what would sound like an understanding tone when appealing to potential students. On the other hand, some progressives are inclined to underline the class-specific differences in higher education in the conviction that in particular those aspiring students who come from the lower classes should be warned not to cherish illusions about their chances.

Things being as they are, even Jencks' study[228] can be seen as a contribution to demotivating potential students, though this may not have been its intention. As demotivation proposals go, it represents a peculiarly "hippy-esque" approach to solving the equal opportunity dilemma: the kind of rich society in which young people flee in droves into a largely apolitical subculture is clearly fruitful soil for notions (such as Jencks') that opportunities for a wide range of leisure-time activities could cut individual demand for higher education, thereby easing competition for the higher positions.

According to one rather irresponsible assertion repeatedly heard in connection with demotivation models, lower-class students have no better chance for higher education in a period of expansion than they did before. No less problematical is the attempt to carry equal opportunity ad absurdum by maintaining that the closer one comes to achieving equality in educational level, the less viable education will be as a determinant of social status. In political terms this can only mean that students ought to cease striving for additional education on the grounds that at some point in the future what will matter so far as rewards are concerned may not be education at all but rather some other criteria. Those who stress that the correlation between social background, education and later occupational position is all but negligible also fail to bear in mind that whereas the privileged frequently have other means for securing their status, education is practically the only way to success for the disadvantaged. Finally, all attempts at demotivation have the result, if taken seriously, that the persons who have allowed themselves to be demotivated are at a particular disadvantage because they have failed to avail themselves of every opportunity open to them under the prevailing system. Since of all

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[228] Cf. Jencks et al., op. cit.

social groups, the underprivileged are most susceptible to such arguments, any policy that takes the failure of equal opportunity policy as its point of departure can only result in greater inequality of opportunity.

The third model can be called the "structural moderation" model. Its point is to design educational institutions, curricula, certificates and transfer requirements so as to make the differences between the various courses of study appear so slight that the demand for certain particularly attractive types of education declines. Measures designed to create a horizontally differentiated structure of higher education can be used as vehicles for quite divergent political objectives in the realm of education: on the one hand, the underlying intention may be to insure that certain subject matter is made part of the education of as many students as possible. On the other hand, the purpose in presenting students with such a confusing array of educational opportunities is often to distract their attention from those educational opportunities that hold promise of the greatest rewards in terms of status.

Such innovations are generally introduced at a time when the less attractive courses of education are beginning to show signs of "depreciating"; upgrading, as we have already shown, often has the effect of reducing competition for the more attractive courses of study, at least for a time. Soon, however, students become aware all over again of the status differences that persist despite a substantial reduction in the differences among the various programs, and the vicious circle is set in motion once again.

Of all the models discussed here, this latter one is most frequently used as the basis for education policy in modern industrial society, yet in principle it is potentially the least effective. Though it has always had limited success

when first applied, such a policy has invariably become ineffectual over the course of educational expansion, as students became more adept at seeing through such attempts to channel their desire for education.

The aim common to all three models is to put a stop to educational expansion and prevent any further worsening of the problems caused by selection. There is no way of mistaking the effort to throw a smokescreen around existing selection mechanisms and at the same time sidetrack part of the students away from those courses of study that bear promise of the highest social rewards. In many instances, an increase in inequality of opportunity is accepted as the price for realizing these objectives.

The fourth model, which focusses on limiting expansion in education in accordance with presumed manpower requirements, has been applied to a certain extent in some east European countries. Planning is carried out according to notions of a "demand" that is anything but imperative. This model threatens to intensify selection problems to an even greater extent than is the case with the "structural moderation" model. Thus, it comes as no surprise that compared to all other industrialized nations save Japan, the Soviet Union appears to be having the worst problems with selection despite special efforts to demotivate the youth population by claiming that stronger educational expansion would be socially disfunctional.

The various policies proposed for putting a stop to educational expansion are open to attack if one draws attention to the vague nature of the notions on manpower requirements that underlie such intentions. One alternative would be to advocate continued expansion as a means of creating a greater potential for personality development, for enrichening a society's culture, and for economic and social change. If this is the

case, the resulting problems of selection within the education system can be expected to trigger off controversy about the way people want the education system to relate to the occupation system. The arguments that emerge in the process can be described in the framework of two further models:

One of these, the fifth of our models, is designed to promote continued educational expansion while simultaneously relieving the education system of as much of its selection function as possible. In contrast to the first model discussed in these pages, reduction in social expectations based on education and/or a relocation of selection into the labor market or the occupation system is expected to create in place of disinterest on the part of young people so far as education is concerned or a decline in demand for higher education, a real liberation of education from the pressures and constraints of selection, enabling education to pursue its "genuine" objectives and none other. Such notions are infused with the hope of resolving the dilemma that is typical of education in industrialized society: that the social relevance of education is largely based on the part education plays in status distribution, while the fact that education has been made available to new sectors of the population and students have been motivated to seek more education has the effect of heightening competition.

In contrast to the first model discussed, this one manages to avoid re-elitizing education; otherwise the objections raised about the one apply to the other. To begin with, despite all good intentions to the contrary, if this model were put into practice, the pressure to select would remain, for it appears impossible to eliminate education's relevance for status. Second, any serious evaluation of this model would have to include consideration of the problems connected with life-long competition. Third, if implemented it would mean giving up all claim to transparency and universality in selection.

The objections we have raised in connection with all of these five models may serve as reasons for opting for a sixth model; one which proposes promoting expansion while at the same time preserving selection through education. This emphasizes education's relevance to society and at the same time draws the consequences from the fact that education's impact lies in the tie that exists between qualification and selection, meaning that this importance is to be found in the development of status aspirations and motivation in connection with the acquisition of specific types of competence.

Any plea for maintaining the existing measure of selection within the education system is bound to give rise to misunderstandings. Anticipating these, we would like to point once again to the connection that exists between this proposal and the failure of the policy of "indirect equalization" which was designed to create equality by working toward a uniform level of education throughout the population.

Efforts to dismantle educational hierarchies and equalize competency levels are quite obviously not enough to reduce social inequality or remove the grounds for its legitimization. There are two fundamental obstacles to any reform-oriented educational policy. One is that even in the education system itself there are enormous constraints from the very beginning on drafting and effecting any policy designed to promote equal opportunity and a more uniform level of qualification throughout the population. Second, it has been shown that the expectations addressed to government with regard to planning and designing educational processes in a rational way cannot be addressed to the same quarter when it comes to shaping developments in the occupation system such as establishing recruitment criteria and defining occupational functions.

Events have shaken ideas of bringing equal opportunities policy, a dynamic development of skills and abilities along with educational motivation on the one hand into harmony with the demand for labor on the job market and presumed qualifications requirements on the other. In this situation, movements on the labor market and shifts in qualifications requirements appear to be a necessary evil to which education policy seeks to adjust through planning and controls. The demand for government action, more planning and controls and greater influence on aspirations is addressed first and foremost toward education, which in any event is more immediately subject to government control. This demand does not imply any readiness to take a more rational approach in the form of overall planning for social development, nor does it signify a willingness to set priorities on the basis of political accords. This, however, is the point where the often repeated demand that education policy be correlated with social policy has to be taken seriously: the social objectives of education reform must not be cast in doubt simply because education reform has been only half-heartedly pursued and because even at that it has encountered opposition from within the occupation system. If these objectives are to be upheld nonetheless, then the task will be to consider the conditions under which education reform can be realized within a wider context. This would undoubtedly involve, among other things, applying planning and other organizational devices to the social sphere of work, which would mean changing conditions on the labor market, laying down guidelines for careers and helping set quality standards for specific job requirements, thereby exerting an influence on the quality of the division of labor and forms of cooperation that obtain in this sphere.

It is more realistic under these circumstances to conceive of continuing expansion while tolerating just as much

selection as exists today, which should be possible without giving up the fundamental objectives of educational reform.

That selection within the education system is having such serious consequences for the learning process and personality development is a deplorable fact, but it is no reason for abandoning the key social objective of giving as far as possible the whole population the tools it needs to understand the conditions under which we all live and work, enabling people to act consciously on this knowledge. Nor does there exist any alternative model according to which education could be made to cease being relevant to status. Nor is it likely that indirect selection through education would bring much relief from the pressures of selection as such in view of the degree to which over the years students have become aware of society's rewards system. Furthermore, considering the problems connected with indirect selection - that students become more strongly oriented toward the "hidden curriculum", for instance - the relief it could be expected to bring would be totally inadequate.

Alternatively, the very fact that they have to play a part in selection gives universities the means of shaping society. The fact that success in higher education has such a bearing on socio-economic status also increases the probability that students will eagerly absorb the education that is offered them and will be able to make conscious use of it later on. Since the occupation system is increasingly interested in the education system's provision of selection per se, not in the particular qualifications higher education can furnish, the universities are in a better position to determine selection criteria themselves and thereby influence what is learned. However, the universities can only fully utilize their latitude in this respect when students are prepared to cope with the discrepancy that exists between their expectations and the reality of working life, and are trained to

take active part in structuring their occupations. Otherwise, university education cannot help but be stifled by selection constraints and will be rendered meaningless by the indifference of students and teaching staff alike.

As long as the basic conditions under which we live and work are characterized by a notable degree of inequality, it would seem essential that there would be a certain measure of rationality in the competition for success in education. Transparency in the selection mechanisms, universalistic criteria in selection, attainability of success, predictability with regard to various types of reward - all this creates more bearable conditions for life and for competing than a more or less uncontrolled struggle for success - even for those who under the circumstances may not enjoy full equality of opportunity.

We do not offer this option in the conviction that it would make possible the optimal development in education and in the relationships between the education system and the occupation system. We are simply concerned with finding the lesser evil: Either one lets selection take place there, where the power in society is concentrated, where selection is governed as it were by "natural forces" and selection criteria are established on the basis of particularistic interests. Or, one attempts to influence this selection process in line with the kind of policy option we have been discussing, knowing that very serious problems for the education system cannot be avoided.

In view of the competition that it would inevitably produce in the education system, the political option we are proposing would be very much less tenable if we considered the prevailing structure of social inequality to be wholly impervious to change. We feel, however, that the best way of breaking the continuity of the structure of social inequality is by creating

a continuity of selection through education: for as we have explained, there is reason for believing that the present legitimization of social inequality will become artificial in time and that students will indeed become capable of re-defining their occupational roles.

The viability of any proposal defining how the education system and the occupation system should relate to one another even under the conditions of social inequality will depend, in the last analysis, on whether we feel it is possible in the long run to eliminate social inequality and are prepared to work toward this end.